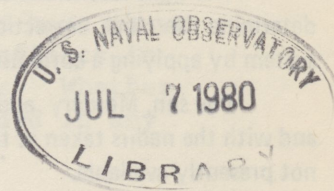


UNITED STATES NAVAL OBSERVATORY

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July 13, 1979



OBSERVATIONS OF THE SUN, MOON, AND PLANETS

SIX-INCH TRANSIT CIRCLE RESULTS

by

F. Stephen Gauss



OBSERVATIONS OF THE SUN, MOON, AND PLANETS SIX-INCH TRANSIT CIRCLE RESULTS

This *Circular* contains positions of the sun, moon and planets observed with the Six-Inch Transit Circle between 6 May 1975 and 4 July 1977. These results are provisional. Definitive results will be published later in a volume of *Publications of the U. S. Naval Observatory*.

Right ascension results for July 1974 through April 1975 will be published at a later date.

The observed positions are geocentric and have received the usual corrections for instrumental errors, refraction, diurnal aberration, parallax, and orbital motion. All positions are for the apparent center of the object.

The right ascensions are on the FK4 system through the use of FK4 positions for the stars used to determine the clock corrections. The declinations of the night objects have been reduced to the FK4 system by applying a correction from the same stars used for clock corrections.

The sun, Mercury and Venus were reduced with the clock corrections of the associated night tour and with the nadirs taken at the time of the observation. Corrections for day minus night differences are not presently available.

Observations of Mercury and Venus were made on the illuminated limb or on the center of light as indicated and reduced with the appropriate corrections to the center of the planet. Observations of the sun, Mars, Jupiter and Saturn were made on both pairs of limbs; those of Mars and Jupiter were corrected for defective illumination. The tabular semidiameters from the ephemeris were used for the correction from limb to center or to compute the correction for defective illumination. The moon observations were made on the illuminated limbs as indicated and have been reduced with the tabular values of the semidiameter corrected for irradiation and with limb corrections from the charts of C. B. Watts (*Astronomical Papers*, Vol. XVII).

The computed positions with which the observed positions are compared were derived from the tabular values of the *American Ephemeris* for the instant when the ephemeris hour angle is zero on the meridian $5^{\text{h}} 08^{\text{m}} 15^{\text{s}}.849$ west longitude. NO CORRECTION HAS BEEN MADE FOR THE DIFFERENCE BETWEEN EPHEMERIS AND UNIVERSAL TIME. The Julian Ephemeris dates refer to the computed times of transit. The distances, in astronomical units, are those interpolated from the ephemeris at the computed time of transit. The ephemerides of the minor planets have been computed from heliocentric rectangular coordinates at the Naval Observatory. For Ceres, Pallas, Juno, and Vesta, these were from R. L. Duncombe (*Astro. Papers*, Vol. XX, Part II); for Hebe, Iris, Flora, Metis and Eunomia, these were computed by P. M. Janiczek. The lunar ephemeris has received differential corrections so that it is on the system $j = 2$ (*Trans. International Astronomical Union*, Vol. XIII, 49). The corrections for parallax in declination for the moon have been made using the IAU dimensions of the earth. Brown's lunation numbers have been indicated.

Attention is specifically drawn to the preliminary nature of these data. Recent investigations have shown the possible existence of small systematic effects in declination arising from instrumental causes. Whether or not these declination data will be included in any final catalog is presently under discussion.

The value that was used for the meridian of the six-inch transit circle is $5^{\text{h}}08^{\text{m}}16^{\text{s}}.188$ west longitude rather than the stated value. See Naval Observatory Circular No. 153. The lunar ephemeris was computed in the system $j = 2$, rather than being corrected differentially.

The observers are identified as follows:

BK	B. L. Klock	HC	H. E. Crull	RR	R. W. Rhynsbarger
CS	C. A. Smith	HD	H. E. Durgin	SG	F. S. Gauss
DR	M. D. Robinson	KR	R. K. Riddle	TC	T. E. Corbin
EH	E. R. Holdenried	RB	R. L. Branham	TR	T. J. Rafferty
EJ	E. S. Jackson	RM	R. J. Miller	WD	W. S. Durham

The values of ΔT from the moon observations (lunation means) are listed in Table 1. ΔT is found by dividing (O-C) by 1.002738 times the variation per hour of longitude. The weights in right ascension are proportional to the square of $15 \cos \delta$ times the variations in right ascension per hour of longitude; those in declination are proportional to the square of the variation in declination per hour of longitude. Only the (O-C)'s in the right ascension were used to derive Table 1.

TABLE 1

LUN.	ΔT	P.E.	No.	LUN.	ΔT	P.E.	No.
648	44 ^s .12	0 ^s .20	6	662	45 ^s .10	0 ^s .58	3
649	44.47	0.36	5	663	45.31	0.45	5
650	43.93	0.31	10	664	45.10	0.25	10
651	43.85	0.25	10	665	45.12	0.49	10
652	42.97	0.57	3	666	45.33	0.15	10
653	42.97	0.31	9	667	45.72	0.32	10
654	44.14	0.16	11	668	45.32	0.54	8
655	44.26	0.19	6	669	46.22	0.39	11
656	45.18	0.36	7	670	46.11	0.16	3
657	45.24	0.88	7	671	46.19	0.25	8
658	45.55	0.33	7	672	46.86	0.41	6
659	45.63	0.15	10	673	46.46	0.40	5
660	45.38	0.22	5	674	46.02	0.47	6
661	45.28	0.27	7				

YEARLY MEANS

	ΔT	P.E.	No.
May - Dec 1975	43 ^s .906	0 ^s .091	60
Jan - Dec 1976	45.353	0.100	99
Jan - Jul 1977	46.306	0.144	39

4 SIX-INCH TRANSIT CIRCLE OBSERVATIONS OF THE SUN, MOON, AND PLANETS

SUN										
Date	J.E.D.	O L	Obs.	R.A.	(O-C)	L Obs.	Decl.	(O-C)	Distance	
	244		h m s	s		° ' "	"	"		
75 05 06.71	2539.21171	HD B	02 52	20.095	+0.116	B +16 29	52.43	-0.25	1.008894	
75 05 07.71	2540.21166	SG	02 56			B +16 46	38.25	+1.01	1.009139	
75 05 08.71	2541.21162	RM B	03 00	05.084	+0.073	+17 03			1.009380	
75 05 13.71	2546.21150	EH B	03 19	37.851	+0.076	B +18 21	02.25	-0.25	1.010524	
75 05 14.71	2547.21150	HD B	03 23	34.178	+0.134	B +18 35	42.91	-0.62	1.010741	
75 05 20.71	2553.21161	EH B	03 47	23.266	+0.153	B +19 57	03.94	-0.19	1.011955	
75 05 22.71	2555.21170	RM B	03 55	23.850	+0.147	B +20 21	29.66	-0.41	1.012335	
75 05 23.71	2556.21175	SG B	03 59	24.914	+0.126	B +20 33	11.61	-0.22	1.012522	
75 05 24.71	2557.21181	RR B	04 03	26.444	+0.066	+20 44			1.012706	
75 05 26.71	2559.21194	RR B	04 11	31.266	+0.185	B +21 06	09.43	+0.07	1.013067	
75 05 27.71	2560.21202	HD B	04 15	34.296	+0.124	+21 16			1.013244	
75 06 02.71	2566.21258	EH B	04 40	02.496	+0.032	+22 10			1.014242	
75 06 19.71	2583.21490	EH B	05 50	25.148	+0.082	B +23 25	22.11	+0.10	1.016123	
75 06 20.72	2584.21506	TR B	05 54	34.750	+0.095	B +23 26	07.10	+0.24	1.016190	
75 06 21.72	2585.21521	RR B	05 58	44.342	+0.120	B +23 26	27.62	+0.77	1.016253	
75 06 23.72	2587.21550	HC B	06 07	03.358	+0.104	+23 25			1.016370	
75 06 25.72	2589.21580	HD B	06 15	22.184	+0.192	B +23 23	39.32	+0.07	1.016473	
75 06 30.72	2594.21651	EH B	06 36	06.667	+0.150	B +23 10	55.45	+1.13	1.016665	
75 07 02.72	2596.21678	SG	06 44			B +23 02	57.01	-0.03	1.016712	
75 07 03.72	2597.21691	TR B	06 48	30.958	+0.123	B +22 58	21.20	-0.82	1.016728	
75 07 08.72	2602.21751	RM B	07 09	05.582	+0.064	+22 29			1.016724	
75 07 21.72	2615.21847	RR B	08 01	44.165	+0.113	B +20 29	53.06	-1.00	1.016050	
75 07 22.72	2616.21850	TR B	08 05	43.394	+0.133	B +20 18	10.69	-1.00	1.015968	
75 07 23.72	2617.21853	HC B	08 09	42.011	+0.120	B +20 06	09.10	+0.21	1.015884	
75 07 26.72	2620.21856	TR B	08 21	34.407	+0.136	B +19 27	59.77	-0.97	1.015609	
75 07 28.72	2622.21855	HD B	08 29	26.410	+0.153	B +19 00	56.67	-1.21	1.015408	
75 07 29.72	2623.21853	RM B	08 33	21.506	+0.137	B +18 46	57.19	-0.80	1.015303	
75 07 31.72	2625.21848	SG B	08 41	09.991	+0.173	B +18 18	01.39	-1.25	1.015078	
75 08 01.72	2626.21844	HC B	08 45	03.254	+0.092	B +18 03	07.62	-0.08	1.014959	
75 08 04.72	2629.21829	RM B	08 56	39.657	-0.016	B +17 16	37.44	-0.35	1.014575	
75 08 07.72	2632.21807	TR B	09 08	10.929	+0.072	+16 27			1.014141	
75 08 08.72	2633.21799	SG B	09 12	00.219	+0.162	B +16 10	43.64	-0.16	1.013986	
75 08 09.72	2634.21790	RR B	09 15	48.741	+0.080	B +15 53	35.60	-0.13	1.013825	
75 08 11.72	2636.21769	TR B	09 23	24.218	+0.120	+15 18			1.013486	
75 08 13.72	2638.21746	HC B	09 30	57.313	+0.125	B +14 42	33.76	-0.29	1.013129	
75 08 16.72	2641.21707	RR B	09 42	12.667	+0.087	B +13 46	49.44	-0.66	1.012565	
75 08 19.72	2643.21677	EH B	09 49	40.270	+0.137	B +13 08	35.41	+0.20	1.012172	
75 08 19.72	2644.21661	RM B	09 53	23.209	+0.082	+12 49			1.011973	
75 08 20.72	2645.21645	RR B	09 57	05.716	+0.086	B +12 29	30.46	+0.00	1.011771	
75 08 24.72	2649.21575	RR B	10 11	51.012	+0.067	B +11 09	00.51	-0.84	1.010941	
75 08 25.72	2650.21556	HC B	10 15	31.332	+0.153	B +10 48	26.10	-0.55	1.010729	
75 08 26.72	2651.21537	TR B	10 19	11.191	+0.168	B +10 27	40.37	-1.30	1.010514	
75 08 27.72	2652.21517	RM B	10 22	50.493	+0.006	B +10 06	46.45	-0.18	1.010296	
75 08 28.71	2653.21497	RR B	10 26	29.634	+0.050	B +09 45	41.60	-0.29	1.010076	
75 08 29.71	2654.21476	EH B	10 30	08.430	+0.096	B +09 24	27.44	-0.27	1.009854	
75 08 30.71	2655.21456	RR B	10 33	46.893	+0.142	B +09 03	04.03	-0.36	1.009628	
75 09 14.71	2670.21107	RR B	11 27	53.551	+0.226	B +03 27	54.31	-1.27	1.005828	
75 09 15.71	2671.21083	TR B	11 31	28.554	+0.075	B +03 04	52.72	-0.39	1.005554	
75 09 27.71	2683.20789	TR B	12 14	32.775	+0.087	B -01 34	32.03	-1.52	1.002229	
75 09 29.71	2685.20742	HD B	12 21	45.453	+0.006	B -02 21	12.17	+0.78	1.001672	
75 09 30.71	2686.20719	SG B	12 25	22.288	+0.083	B -02 44	33.77	-1.18	1.001391	
75 10 01.71	2687.20697	TR B	12 28	59.381	+0.131	B -03 07	51.76	-1.16	1.001111	
75 10 03.71	2689.20653	HD B	12 36	14.445	+0.196	B -03 54	19.53	+0.78	1.000543	
75 10 04.71	2690.20632	TR B	12 39	52.272	+0.031	B -04 17	31.46	-0.11	1.000257	
75 10 06.71	2692.20590	HC B	12 47	09.456	+0.164	B -05 03	43.86	-0.01	0.999680	

SUN

Date	J.E.D.	O L	Obs.	R.A.	(O-C)	L Obs.	Decl.	(O-C)	Distance
	244		h m s	s		° ' "	"		
75 10 07.71	2693.20570	RR B	12 50	48.464	+0.81	B -05 26	44.55	-0.06	0.999389
75 10 08.71	2694.20550	HC B	12 54	28.049	+1.70	B -05 49	40.94	-0.02	0.999097
75 10 13.70	2699.20459	RR B	13 12	52.057	+1.92	-07 43			0.997633
75 10 14.70	2700.20443	TR B	13 16	34.150	+0.54	B -08 05	31.29	-1.26	0.997342
75 10 15.70	2701.20427	HC B	13 20	16.968	+1.23	B -08 27	47.22	-0.77	0.997052
75 10 18.70	2704.20383	TR B	13 31	28.638	+1.94	B -09 33	51.89	-0.65	0.996194
75 10 21.70	2707.20345	EH B	13 42	45.601	+1.19	B -10 38	41.99	-0.63	0.995356
75 10 22.70	2708.20334	HC B	13 46	32.503	+0.36	B -11 00	01.11	-1.33	0.995081
75 10 23.70	2709.20324	TR B	13 50	20.325	+1.96	B -11 21	08.57	-0.22	0.994809
75 10 28.70	2714.20285	TR B	14 09	29.493	+1.83	B -13 04	11.93	-1.00	0.993484
75 10 29.70	2715.20280	EH B	14 13	21.551	+1.37	-13 24			0.993226
75 10 30.70	2716.20276	HC B	14 17	14.475	+1.66	B -13 44	02.59	-1.01	0.992968
75 11 02.70	2719.20269	RR B	14 28	57.891	+0.97	B -14 42	08.64	+0.07	0.992200
75 11 03.70	2720.20268	TR B	14 32	54.007	+0.96	-15 01			0.991947
75 11 08.70	2725.20280	RR B	14 52	46.987	+1.57	B -16 31	47.41	-0.55	0.990692
75 11 09.70	2726.20285	RR B	14 56	47.953	+0.75	B -16 49	06.56	+0.38	0.990447
75 11 11.70	2728.20298	SG B	15 04	52.593	+1.25	B -17 22	54.62	+0.53	0.989964
75 11 15.70	2732.20336	TR B	15 21	11.811	+1.80	B -18 26	52.54	+0.52	0.989038
75 11 16.70	2733.20348	RR B	15 25	18.672	+1.58	B -18 42	05.46	-0.76	0.988817
75 11 17.70	2734.20361	HC B	15 29	26.371	+1.33	B -18 56	56.40	+0.17	0.988600
75 11 18.70	2735.20375	HD B	15 33	34.876	+0.87	B -19 11	28.74	-0.63	0.988388
75 11 19.70	2736.20390	SG B	15 37	44.278	+1.01	B -19 25	38.47	+0.52	0.988180
75 11 20.70	2737.20405	HC B	15 41	54.443	+0.48	B -19 39	28.45	+0.53	0.987978
75 11 26.71	2743.20520	TR B	16 07	12.879	+1.44	B -20 54	47.04	+1.02	0.986862
75 11 28.71	2745.20565	HC B	16 15	45.227	+1.34	B -21 16	50.48	-0.05	0.986523
75 11 29.71	2746.20589	RR B	16 20	02.568	+1.93	B -21 27	13.87	+1.72	0.986358
75 12 01.71	2748.20639	EH B	16 28	39.158	+1.07	B -21 46	53.94	-1.49	0.986038
75 12 02.71	2749.20666	TR B	16 32	58.536	+1.41	-21 56			0.985882
75 12 05.71	2752.20749	RM B	16 46	00.276	+1.77	B -22 21	03.02	+0.86	0.985432
75 12 06.71	2753.20778	TR B	16 50	21.909	+1.16	B -22 28	30.15	+2.04	0.985288
75 12 07.71	2754.20807	RR B	16 54	44.125	+1.29	B -22 35	33.30	+0.85	0.985148
75 12 10.71	2757.20899	RM B	17 07	53.525	+1.01	B -22 53	58.30	+1.78	0.984752
75 12 11.71	2758.20931	EH B	17 12	17.552	+1.43	B -22 59	14.24	+0.44	0.984629
75 12 17.71	2764.21129	EH B	17 38	48.180	+1.21	B -23 21	00.49	+3.60	0.984002
75 12 18.71	2765.21163	RM B	17 43	14.275	+2.55	B -23 23	04.04	+0.70	0.983918
75 12 20.71	2767.21231	RR	17 52			B -23 25	40.32	+1.37	0.983769
75 12 22.71	2769.21300	HD B	18 00	59.282	+0.81	B -23 26	25.54	+0.23	0.983645
75 12 23.71	2770.21334	RR B	18 05	25.779	+1.02	B -23 26	03.81	+1.62	0.983592
75 12 24.71	2771.21369	BK B	18 09	52.272	+1.02	B -23 25	15.37	+1.32	0.983545
76 01 01.72	2779.21641	RR B	18 45	20.531	+0.98	B -23 01	51.85	+0.66	0.983333
76 01 04.72	2782.21739	RR B	18 58	34.611	+1.67	B -22 45	25.59	+2.00	0.983319
76 01 09.72	2787.21891	EH B	19 20	29.379	+2.46	B -22 09	04.71	+2.40	0.983379
76 01 10.72	2788.21919	RR B	19 24	50.656	+1.47	B -22 00	29.50	+2.54	0.983406
76 01 12.72	2790.21975	HC B	19 33	31.615	+0.96	B -21 42	03.69	+1.20	0.983474
76 01 14.72	2792.22027	TR B	19 42	10.197	+1.53	B -21 21	56.65	+0.26	0.983567
76 01 15.72	2793.22052	SG B	19 46	28.453	+1.21	-21 11			0.983622
76 01 17.72	2795.22100	RR B	19 55	02.909	+0.45	B -20 48	40.64	+0.13	0.983753
76 01 18.72	2796.22123	RR B	19 59	19.242	+1.65	B -20 36	46.89	+0.60	0.983827
76 01 19.72	2797.22145	RR B	20 03	34.787	+2.05	B -20 24	29.21	+1.51	0.983908
76 01 24.72	2802.22241	TR B	20 24	41.239	+1.41	-19 17			0.984400
76 01 28.72	2806.22303	HD B	20 41	20.663	+0.89	B -18 17	18.80	+0.80	0.984877
76 01 29.72	2807.22316	SG B	20 45	28.576	+1.26	B -18 01	26.31	+1.11	0.985005
76 02 07.72	2816.22391	RR B	21 22	02.493	+1.53	-15 24			0.986307
76 02 08.72	2817.22394	RR B	21 26	02.232	+2.51	B -15 06	06.69	+1.39	0.986470
76 02 09.72	2818.22397	HC B	21 30	00.944	+1.33	B -14 47	04.09	+1.41	0.986637

SUN											
Date	J.E.D.	O L	Obs.	R.A.	(O-C)	L Obs.	Decl.	(O-C)	Distance		
244											
			h m s	s		° ' "	"	"			
76 02 10.72	2819.22399	RM B	21 33	58.855	+0.21	B -14 27	46.60	+1.57	0.986808		
76 02 12.72	2821.22399	TR B	21 41	52.581	+0.074	B -13 48	29.02	+1.64	0.987164		
76 02 14.72	2823.22396	RR B	21 49	43.133	+0.060	B -13 08	18.62	+0.25	0.987541		
76 02 18.72	2827.22380	SG B	22 05	15.441	+0.083	B -11 45	22.41	+2.49	0.988355		
76 02 19.72	2828.22374	HD B	22 09	06.789	+0.101	B -11 24	09.21	+3.18	0.988570		
76 02 20.72	2829.22367	RM B	22 12	57.431	+0.080	B -11 02	47.31	+1.63	0.988790		
76 02 21.72	2830.22360	RR B	22 16	47.503	+0.118	-10 41			0.989014		
76 02 23.72	2832.22343	EH B	22 24	25.681	+0.117	B -09 57	35.86	+1.88	0.989472		
76 02 25.72	2834.22323	TR B	22 32	01.425	+0.072	B -09 13	23.25	+0.47	0.989940		
76 02 29.72	2838.22275	RR B	22 47	06.210	+0.047	B -07 43	17.55	+1.58	0.990900		
76 03 05.72	2843.22202	TR B	23 05	45.996	+0.290	B -05 48	15.02	+1.37	0.992135		
76 03 07.72	2845.22169	RR B	23 13	10.547	+0.175	B -05 01	38.82	+1.18	0.992639		
76 03 10.72	2848.22116	TR B	23 24	14.544	+0.094	B -03 51	17.39	-0.06	0.993409		
76 03 11.72	2849.22098	SG B	23 27	55.219	+0.124	B -03 27	44.12	-0.24	0.993670		
76 03 14.72	2852.22041	RR B	23 38	55.374	+0.169	-02 16			0.994468		
76 03 15.72	2853.22021	EH B	23 42	34.758	+0.052	B -01 53	09.62	+0.43	0.994740		
76 03 19.72	2857.21940	TR B	23 57	10.742	+0.005	B -00 18	21.04	+0.02	0.995859		
76 03 20.72	2858.21920	TR B	00 00	49.502	+0.121	B +00 05	21.41	+0.40	0.996144		
76 03 21.72	2859.21899	TR B	00 04	28.050	+0.129	B +00 29	02.48	+0.10	0.996432		
76 03 23.72	2861.21857	TR B	00 11	44.882	+0.092	B +01 16	22.14	+0.85	0.997010		
76 03 24.72	2862.21836	RM B	00 15	23.282	+0.128	+01 39			0.997301		
76 03 26.72	2864.21794	EH B	00 22	39.890	+0.059	B +02 27	07.60	+3.10	0.997881		
76 03 28.72	2866.21752	RR B	00 29	56.640	+0.079	B +03 14	00.72	+1.69	0.998461		
76 04 01.72	2870.21669	RM B	00 44	30.717	-0.017	B +04 47	01.45	+1.06	0.999609		
76 04 03.72	2872.21628	RR B	00 51	48.609	+0.151	B +05 33	02.22	+0.66	1.000178		
76 04 05.72	2874.21588	SG B	00 59	06.844	+0.068	B +06 18	39.92	+0.72	1.000741		
76 04 06.72	2875.21568	EH B	01 02	46.324	+0.126	B +06 41	19.47	+1.13	1.001022		
76 04 07.72	2876.21548	TR B	01 06	25.867	+0.058	B +07 03	50.28	-0.26	1.001302		
76 04 08.72	2877.21529	RM B	01 10	05.712	+0.081	B +07 26	16.20	+0.78	1.001581		
76 04 09.72	2878.21510	HC B	01 13	45.742	+0.051	B +07 48	33.50	+0.82	1.001861		
76 04 10.71	2879.21491	TR B	01 17	26.074	+0.085	B +08 10	42.41	+0.35	1.002139		
76 04 12.71	2881.21455	HC B	01 24	47.473	+0.079	B +08 54	36.23	+0.72	1.002698		
76 04 13.71	2882.21437	EH B	01 28	28.679	+0.136	B +09 16	20.79	+1.78	1.002979		
76 04 14.71	2883.21420	RM B	01 32	10.100	+0.075	B +09 37	53.55	+0.27	1.003260		
76 04 15.71	2884.21403	HC B	01 35	51.944	+0.081	B +09 59	17.79	-0.16	1.003541		
76 04 16.71	2885.21386	TR B	01 39	34.177	+0.109	B +10 20	33.04	+0.16	1.003823		
76 04 17.71	2886.21370	RR B	01 43	16.746	+0.079	B +10 41	38.09	+0.49	1.004105		
76 04 18.71	2887.21354	TR B	01 46	59.821	+0.156	B +11 02	31.74	-0.08	1.004387		
76 04 19.71	2888.21339	RM B	01 50	43.095	+0.001	B +11 23	15.51	+0.20	1.004669		
76 04 20.71	2889.21324	EH B	01 54	27.122	+0.165	B +11 43	47.84	+0.23	1.004949		
76 04 21.71	2890.21310	SG B	01 58	11.336	+0.072	B +12 04	09.70	+1.39	1.005227		
76 04 24.71	2893.21271	RR B	02 09	27.149	+0.136	B +13 03	59.15	+0.87	1.006052		
76 04 26.71	2895.21248	RM B	02 17	00.074	+0.114	B +13 42	48.27	+0.40	1.006590		
76 05 08.71	2907.21159	RR B	03 03	02.122	+0.232	B +17 15	18.74	-0.28	1.009542		
76 05 09.71	2908.21156	RR B	03 06	55.723	+0.150	B +17 31	16.72	+0.47	1.009767		
76 05 10.71	2909.21153	SG B	03 10	49.916	+0.109	+17 46			1.009992		
76 05 12.71	2911.21150	HD B	03 18	40.063	+0.091	B +18 17	21.33	+0.16	1.010435		
76 05 20.71	2919.21163	HC B	03 50	23.637	+0.108	B +20 06	22.94	+0.05	1.012135		
76 05 21.71	2920.21167	EH B	03 54	24.052	+0.030	B +20 18	31.42	+0.62	1.012335		
76 05 22.71	2921.21173	TR B	03 58	25.117	+0.049	B +20 30	17.48	-0.33	1.012531		
76 05 23.71	2922.21178	RR B	04 02	26.683	+0.041	+20 41			1.012723		
76 05 24.71	2923.21185	TR B	04 06	28.744	-0.009	B +20 52	48.90	+0.52	1.012911		
76 05 27.71	2926.21208	HD B	04 18	38.136	+0.020	B +21 23	53.21	+1.04	1.013446		
76 05 28.71	2927.21216	RM B	04 22	42.277	+0.072	B +21 33	28.82	-0.44	1.013614		
76 05 31.71	2930.21245	EH	04 34			B +22 00	06.14	+0.74	1.014088		

SUN

Date	J.E.D.	O	L	Obs.	R.A.	(O-C)	L	Obs.	Decl.	(O-C)	Distance
	244			h m s	s			° ' "	"	"	
76 06 01.71	2931.21256	TR	B	04 39	02.951	+0.051		+22 08			1.014236
76 06 03.71	2933.21279	EH	B	04 47	15.601	+0.035	B	+22 23	15.37	+0.63	1.014515
76 06 04.71	2934.21290	HC	B	04 51	22.531	+0.126		+22 30			1.014648
76 06 06.71	2936.21315	EH	B	04 59	36.973	-0.035		+22 42			1.014900
76 06 07.71	2937.21328	RM	B	05 03	44.794	+0.060	B	+22 48	37.42	-0.13	1.015020
76 06 08.71	2938.21341	SG	B	05 07	52.828	+0.110		+22 53			1.015136
76 06 09.71	2939.21355	HC	B	05 12	01.040	+0.104	B	+22 58	54.11	-0.98	1.015249
76 06 11.71	2941.21382	EH	B	05 20	18.146	+0.100	B	+23 07	35.41	-0.29	1.015467
76 06 12.71	2942.21397	RR	B	05 24	27.017	+0.125	B	+23 11	18.61	-0.81	1.015571
76 06 13.71	2943.21411	RR	B	05 28	36.003	+0.101	B	+23 14	38.60	+0.01	1.015672
76 06 15.71	2945.21440	RM	B	05 36	54.437	+0.057		+23 20			1.015865
76 06 18.71	2948.21485	EH		05 49			B	+23 25	04.35	-0.04	1.016126
76 06 19.71	2949.21500	RR		05 53			B	+23 25	55.13	-0.12	1.016204
76 06 20.72	2950.21515	RR		05 57			B	+23 26	21.54	+0.29	1.016279
76 06 23.72	2953.21561	RR	B	06 10	11.204	+0.181	B	+23 25	09.86	-0.37	1.016469
76 06 24.72	2954.21576	RR	B	06 14	20.718	+0.182	B	+23 23	57.09	+0.08	1.016522
76 06 26.72	2956.21605	RR	B	06 22	39.348	+0.122	B	+23 20	15.52	-0.87	1.016611
76 06 27.72	2957.21620	TR	B	06 26	48.520	+0.169	B	+23 17	49.22	-0.01	1.016645
76 06 28.72	2958.21634	SG	B	06 30	57.439	+0.147	B	+23 14	57.07	-0.41	1.016674
76 07 02.72	2962.21688	TR		06 47			B	+22 59	27.36	+0.37	1.016730
76 07 06.72	2966.21737	HD		07 03			B	+22 37	32.29	+0.25	1.016699
76 07 08.72	2968.21759	EH		07 12			B	+22 24	12.54	-0.56	1.016657
76 07 09.72	2969.21769	TR		07 16			B	+22 16	58.29	-0.41	1.016631
76 07 12.72	2972.21796	TR	B	07 28	30.041	+0.164	B	+21 52	57.97	-0.31	1.016532
76 07 13.72	2973.21804	TR	B	07 32	33.497	+0.058	B	+21 44	10.61	-2.33	1.016493
76 07 14.72	2974.21812	EH	B	07 36	36.543	+0.027	B	+21 35	05.14	-0.21	1.016450
76 07 15.72	2975.21819	HC	B	07 40	39.072	-0.037	B	+21 25	35.37	-0.17	1.016403
76 07 17.72	2977.21831	RR		07 48			B	+21 05	30.44	-0.01	1.016297
76 07 19.72	2979.21841	EH	B	07 56	44.495	+0.098		+20 43			1.016174
76 07 20.72	2980.21845	TR	B	08 00	44.474	+0.075		+20 32			1.016105
76 07 21.72	2981.21848	EH	B	08 04	43.947	+0.088	B	+20 21	04.88	+0.30	1.016032
76 07 25.72	2985.21855	RR	B	08 20	36.228	+0.149		+19 31			1.015685
76 07 26.72	2986.21855	TR	B	08 24	32.798	+0.119	B	+19 17	53.56	+0.32	1.015584
76 07 27.72	2987.21855	SG	B	08 28	28.783	+0.106	B	+19 04	16.08	-0.42	1.015477
76 07 28.72	2988.21853	TR	B	08 32	24.222	+0.155	B	+18 50	19.86	-0.99	1.015365
76 07 29.72	2989.21851	RM	B	08 36	19.043	+0.206	B	+18 36	06.52	-0.22	1.015246
76 07 31.72	2991.21845	RR	B	08 44	06.598	+0.087	B	+18 06	43.26	-0.63	1.014991
76 08 03.72	2994.21830	RM		08 55			B	+17 20	29.85	+1.97	1.014574
76 08 04.72	2995.21824	EH	B	08 59	34.472	+0.099		+17 04			1.014426
76 08 05.72	2996.21817	TR	B	09 03	24.919	+0.138	B	+16 48	12.35	-0.43	1.014275
76 08 06.72	2997.21809	SG		09 07			B	+16 31	38.40	-2.37	1.014120
76 08 11.72	3002.21759	EH	B	09 26	14.706	+0.096	B	+15 05	06.22	-1.47	1.013306
76 08 12.72	3003.21748	RR	B	09 30	01.048	+0.147	B	+14 47	03.78	-0.66	1.013136
76 08 13.72	3004.21735	BK	B	09 33	46.813	+0.169	B	+14 28	45.91	-1.21	1.012962
76 08 15.72	3006.21708	RR	B	09 41	16.631	+0.093	B	+13 51	30.53	-0.40	1.012606
76 08 16.72	3007.21694	SG	B	09 45	00.823	+0.107	B	+13 32	32.77	+0.00	1.012423
76 08 17.72	3008.21679	EH	B	09 48	44.580	+0.179	B	+13 13	21.31	-0.35	1.012238
76 08 18.72	3009.21664	RR	B	09 52	27.686	+0.084	B	+12 53	57.69	-0.18	1.012048
76 08 19.72	3010.21648	TC	B	09 56	10.443	+0.123	B	+12 34	20.98	-0.80	1.011855
76 08 21.72	3012.21614	RR	B	10 03	34.505	+0.123	B	+11 54	33.86	-0.05	1.011458
76 08 22.72	3013.21597	RR	B	10 07	15.888	+0.144	B	+11 34	22.83	-0.03	1.011252
76 08 23.72	3014.21579	EH	B	10 10	56.804	+0.128		+11 14			1.011042
76 08 24.72	3015.21560	RR	B	10 14	37.279	+0.095	B	+10 53	26.74	-1.12	1.010829
76 08 26.72	3017.21522	TR	B	10 21	57.051	+0.094	B	+10 11	50.53	-1.10	1.010385
76 08 29.71	3020.21461	TR	B	10 32	53.882	+0.153		+09 08			1.009689

SUN

Date	J.E.D.	O	L	Obs.	R.A.	(O-C)	L	Obs.	Decl.	(O-C)	Distance
	244			h m s	s			° ' "			
76 08 30.71	3021.21440	TC	B	10 36	32.052	+0.120	B	+08 46	43.98	-1.92	1.009449
76 08 31.71	3022.21418	EH	B	10 40	09.915	+0.126	B	+08 25	07.04	-0.74	1.009205
76 09 06.71	3028.21281	RR	B	11 01	50.874	+0.075	B	+06 12	41.05	-1.40	1.007697
76 09 08.71	3030.21234	CS	B	11 09	02.779	+0.199		+05 27			1.007183
76 09 11.71	3033.21161	RR	B	11 19	49.189	+0.080	B	+04 19	29.37	-0.57	1.006406
76 09 12.71	3034.21136	RR	B	11 23	24.565	+0.166	B	+03 56	34.89	-1.55	1.006145
76 09 13.71	3035.21112	SG	B	11 26	59.773	+0.151	B	+03 33	37.67	-1.00	1.005883
76 09 14.71	3036.21087	EJ	B	11 30	34.897	+0.107	B	+03 10	35.41	-1.48	1.005620
76 09 17.71	3039.21013	TC	B	11 41	20.357	+0.140	B	+02 01	10.06	-1.14	1.004822
76 10 04.71	3056.20615	TR	B	12 42	37.250	+0.110	B	-04 34	58.04	+0.86	0.999978
76 10 05.71	3057.20594	EJ	B	12 46	15.749	+0.149	B	-04 58	04.12	-0.63	0.999686
76 10 10.70	3062.20497	RR	B	13 04	34.169	+0.206	B	-06 52	24.01	-0.70	0.998249
76 10 11.70	3063.20479	TR	B	13 08	15.121	+0.111	B	-07 15	00.17	+0.09	0.997965
76 10 12.70	3064.20462	TR	B	13 11	56.661	+0.096	B	-07 37	31.49	-0.17	0.997683
76 10 13.70	3065.20445	EJ	B	13 15	38.759	+0.110	B	-07 59	55.71	+0.57	0.997403
76 10 14.70	3066.20429	TC	B	13 19	21.419	+0.134	B	-08 22	14.98	-0.36	0.997124
76 10 15.70	3067.20414	RB	B	13 23	04.609	+0.110		-08 44			0.996846
76 10 16.70	3068.20399	RR	B	13 26	48.319	+0.027		-09 06			0.996570
76 10 18.70	3070.20372	TR		13 34			B	-09 50	15.66	-1.26	0.996018
76 10 19.70	3071.20359	EH	B	13 38	03.461	+0.081		-10 11			0.995743
76 10 21.70	3073.20336	TR	B	13 45	36.802	+0.121	B	-10 54	47.54	-1.44	0.995195
76 10 22.70	3074.20326	EJ	B	13 49	24.500	+0.156		-11 15			0.994919
76 10 23.70	3075.20316	CS	B	13 53	12.837	+0.132	B	-11 36	59.78	-0.55	0.994645
76 10 28.70	3080.20281	TR	B	14 12	25.316	+0.153	B	-13 19	20.26	-0.03	0.993276
76 10 29.70	3081.20277	EJ	B	14 16	17.922	+0.069	B	-13 39	12.06	+0.12	0.993005
76 10 31.70	3083.20271	RR	B	14 24	05.557	+0.065	B	-14 18	17.10	-0.42	0.992470
76 11 01.70	3084.20269	CS	B	14 28	00.600	+0.125	B	-14 37	29.54	-1.22	0.992206
76 11 02.70	3085.20268	EJ	B	14 31	56.307	+0.060		-14 56			0.991945
76 11 04.70	3087.20269	SG	B	14 39	50.323	+0.125	B	-15 33	36.41	+0.08	0.991434
76 11 06.70	3089.20274	RR	B	14 47	47.630	+0.185	B	-16 09	44.29	+1.30	0.990937
76 11 07.70	3090.20278	CS	B	14 51	47.350	+0.027		-16 27			0.990694
76 11 08.70	3091.20282	TR	B	14 55	48.175	+0.123	B	-16 44	49.79	+0.15	0.990455
76 11 10.70	3093.20295	CS	B	15 03	52.184	+0.112	B	-17 18	46.24	+0.11	0.989990
76 11 13.70	3096.20321	RR	B	15 16	04.743	+0.148	B	-18 07	26.07	+0.73	0.989320
76 11 14.70	3097.20332	EH	B	15 20	10.670	+0.170	B	-18 23	02.25	+0.67	0.989104
76 11 16.70	3099.20357	TR	B	15 28	25.002	+0.094		-18 53			0.988683
76 11 18.70	3101.20385	EH	B	15 36	42.869	+0.115	B	-19 22	09.98	-0.16	0.988272
76 11 19.70	3102.20401	TC	B	15 40	53.084	+0.135	B	-19 36	04.26	+1.06	0.988071
76 11 20.70	3103.20418	RR	B	15 45	04.141	+0.165	B	-19 49	38.84	+0.60	0.987872
76 11 21.70	3104.20435	RR	B	15 49	15.945	+0.122	B	-20 02	49.90	+2.11	0.987674
76 11 23.70	3106.20473	SG	B	15 57	42.047	+0.137	B	-20 28	09.55	+1.21	0.987286
76 11 26.71	3109.20537	RR	B	16 10	26.918	+0.202	B	-21 03	16.99	+0.52	0.986724
76 11 27.71	3110.20560	TR	B	16 14	43.238	+0.148	B	-21 14	12.18	+0.55	0.986543
76 11 30.71	3113.20633	EJ	B	16 27	36.527	+0.241	B	-21 44	31.39	+1.27	0.986024
76 12 01.71	3114.20659	TR	B	16 31	55.440	+0.121	B	-21 53	49.12	+0.56	0.985860
76 12 03.71	3116.20713	BK		16 40			B	-22 11	04.64	+3.28	0.985548
76 12 05.71	3118.20770	RR	B	16 49	17.680	+0.215	B	-22 26	43.04	-0.03	0.985258
76 12 09.71	3122.20890	EH	B	17 06	48.272	+0.113	B	-22 52	36.89	-0.09	0.984745
76 12 10.71	3123.20922	EH	B	17 11	12.127	+0.137	B	-22 57	56.83	+1.22	0.984631
76 12 13.71	3126.21019	BK	B	17 24	25.968	+0.136	B	-23 11	17.27	+0.30	0.984323
76 12 18.71	3131.21188	CS	B	17 46	35.132	+0.204		-23 24			0.983906
76 12 22.71	3135.21326	CS	B	18 04	21.299	+0.135	B	-23 26	08.34	+1.08	0.983641
76 12 23.71	3136.21361	EH	B	18 08	47.874	+0.087	B	-23 25	25.74	+1.76	0.983583
76 12 26.71	3139.21465	RR	B	18 22	07.369	+0.142	B	-23 20	32.41	+0.14	0.983434
76 12 27.71	3140.21499	RB	B	18 26	33.460	+0.023		-23 17			0.983394

SIX-INCH TRANSIT CIRCLE OBSERVATIONS OF THE SUN, MOON, AND PLANETS 9

SUN

Date	J.E.D.	O	L	Obs.	R.A.	(O-C)	L	Obs.	Decl.	(O-C)	Distance
	244			h m s	s			° ' "	"		
76 12 28.72	3141.21533	CS	B	18 30	59.620	+0.161	B	-23 14	53.79	+1.41	0.983358
76 12 31.72	3144.21633	CS	B	18 44	16.146	+0.090	B	-23 02	58.40	+1.25	0.983284
77 01 01.72	3145.21666	RR	B	18 48	41.222	+0.223	B	-22 58	04.75	+1.07	0.983270
77 01 02.72	3146.21699	RR	B	18 53	05.725	+0.129	B	-22 52	43.63	+0.78	0.983263
77 01 07.72	3151.21853	RR	B	19 15	02.621	+0.138	B	-22 19	10.59	+0.81	0.983320
77 01 08.72	3152.21883	RR	B	19 19	24.652	+0.188	B	-22 11	07.70	+1.16	0.983350
77 01 11.72	3155.21967	CS	B	19 32	27.372	+0.176	B	-21 44	24.61	+0.78	0.983478
77 01 13.72	3157.22020	SG	B	19 41	06.270	+0.108		-21 24			0.983592
77 01 26.72	3170.22286	EH		20 36			B	-18 36	29.97	+2.39	0.984715
77 01 31.72	3175.22347	TC	B	20 56	47.600	+0.156	B	-17 16	01.77	+1.42	0.985335
77 02 01.72	3176.22356	EH	B	21 00	52.221	+0.143	B	-16 58	59.17	+1.93	0.985474
77 02 07.72	3182.22392	TC	B	21 25	02.850	+0.187		-15 10			0.986427
77 03 10.72	3213.22119	EH	B	23 23	19.388	+0.097	B	-03 57	06.71	+1.82	0.993369
77 03 11.72	3214.22101	RR	B	23 27	00.146	+0.126	B	-03 33	33.42	+2.13	0.993642
77 03 16.72	3219.22005	TC	B	23 45	19.820	+0.107	B	-01 35	19.62	-0.46	0.995030
77 03 17.72	3220.21985	EH	B	23 48	59.062	+0.071	B	-01 11	34.85	+1.34	0.995310
77 03 19.72	3222.21945	CS	B	23 56	17.123	+0.091	B	-00 24	08.84	+0.95	0.995868
77 03 21.72	3224.21904	BK	B	00 03	34.595	+0.096	B	+00 23	15.99	+1.17	0.996428
77 03 23.72	3226.21862	TR	B	00 10	51.600	+0.073	B	+01 10	34.06	-0.59	0.996985
77 03 24.72	3227.21841	SG	B	00 14	29.892	-0.030	B	+01 34	12.99	+1.15	0.997264
77 03 25.72	3228.21820	TC	B	00 18	08.378	+0.113	B	+01 57	46.99	+0.23	0.997543
77 03 26.72	3229.21799	CS	B	00 21	46.763	+0.186	B	+02 21	20.43	+1.38	0.997822
77 03 29.72	3232.21736	EJ	B	00 32	41.591	+0.123	B	+03 31	36.78	+0.44	0.998662
77 03 30.72	3233.21715	BK	B	00 36	19.777	-0.033	B	+03 54	54.48	+0.03	0.998942
77 03 31.72	3234.21694	RR	B	00 39	58.239	+0.020	B	+04 18	08.46	+0.37	0.999224
77 04 01.72	3235.21673	CS	B	00 43	36.853	+0.143	B	+04 41	16.75	-0.26	0.999507
77 04 03.72	3237.21632	RR	B	00 50	54.109	+0.093	B	+05 27	19.45	+0.33	1.000077
77 04 07.72	3241.21551	RR	B	01 05	30.719	+0.060	B	+06 58	11.89	-0.23	1.001233
77 04 08.72	3242.21532	EJ	B	01 09	10.462	+0.089	B	+07 20	37.68	-0.96	1.001524
77 04 09.72	3243.21513	RR	B	01 12	50.468	+0.116	B	+07 42	58.43	+0.61	1.001815
77 04 10.71	3244.21494	RR	B	01 16	30.689	+0.072	B	+08 05	09.14	-0.20	1.002106
77 04 11.71	3245.21475	EH	B	01 20	11.283	+0.112	B	+08 27	13.82	+1.05	1.002396
77 04 12.71	3246.21457	TR	B	01 23	52.201	+0.155	B	+08 49	07.90	+0.10	1.002686
77 04 19.71	3253.21342	TR	B	01 49	48.126	+0.063		+11 18			1.004656
77 04 20.71	3254.21327	TC	B	01 53	31.963	+0.045	B	+11 38	44.16	+0.32	1.004928
77 04 21.71	3255.21313	EH	B	01 57	16.436	+0.233		+11 59			1.005196
77 04 22.71	3256.21300	EJ	B	02 01	00.946	+0.028	B	+12 19	19.67	-0.08	1.005463
77 04 26.71	3260.21250	SG	B	02 16	04.349	+0.063	B	+13 38	02.83	+0.25	1.006504
77 04 27.71	3261.21239	DR	B	02 19	51.450	+0.140	B	+13 57	10.03	-0.29	1.006759
77 04 28.71	3262.21229	EH	B	02 23	38.886	+0.069	B	+14 16	04.09	-0.15	1.007012
77 04 29.71	3263.21219	RR	B	02 27	26.905	+0.086	B	+14 34	45.09	+1.12	1.007264
77 04 30.71	3264.21210	RR	B	02 31	15.405	+0.075	B	+14 53	08.58	-0.62	1.007514
77 05 03.71	3267.21185	EJ	B	02 42	44.164	+0.127	B	+15 46	54.60	-0.54	1.008260
77 05 06.71	3270.21167	SG	B	02 54	17.822	+0.071	B	+16 38	20.41	+0.31	1.008997
77 05 08.71	3272.21158	RR	B	03 02	03.291	+0.158	B	+17 11	14.44	-0.13	1.009481
77 05 12.71	3276.21148	BK	B	03 17	41.040	+0.071	B	+18 13	34.02	-1.21	1.010418
77 05 13.71	3277.21148	DR	B	03 21	36.908	+0.001	B	+18 28	24.46	-0.72	1.010644
77 05 14.71	3278.21148	RR	B	03 25	33.465	+0.027	B	+18 42	56.47	-0.11	1.010865
77 05 16.71	3280.21150	TR	B	03 33	28.340	+0.109	B	+19 11	01.25	-1.05	1.011295
77 05 17.71	3281.21152	EH	B	03 37	26.682	+0.189	B	+19 24	35.00	-1.11	1.011504
77 05 20.71	3284.21161	BK	B	03 49	24.689	+0.076	B	+20 03	18.29	+0.43	1.012102
77 05 21.71	3285.21166	RR	B	03 53	25.209	+0.142	B	+20 15	32.30	+1.25	1.012292
77 05 22.71	3286.21171	RR	B	03 57	26.197	+0.165	B	+20 27	24.34	+0.90	1.012478
77 05 26.71	3290.21197	SG	B	04 13	34.948	+0.077	B	+21 11	20.71	+0.65	1.013177
77 05 27.71	3291.21205	RR	B	04 17	38.461	+0.202	B	+21 21	25.37	+0.56	1.013342

SUN

Date	J.E.D.	O	L	Obs.	R.A.	(O-C)	L	Obs.	Decl.	(O-C)	Distance
244		h m s			s		° ' "			"	
77 05 28.71	3292.21213	CS	B	04 21	42.261	+0.166	B	+21 31	07.91	+0.62	1.013504
77 05 29.71	3293.21222	RR	B	04 25	46.442	+0.079		+21 40			1.013663
77 06 02.71	3297.21263	SG	B	04 42	07.726	+0.100	B	+22 13	59.95	-0.37	1.014270
77 06 03.71	3298.21274	RB	B	04 46	14.039	+0.118		+22 21			1.014416
77 06 04.71	3299.21286	CS	B	04 50	20.701	+0.117	B	+22 28	28.02	+0.23	1.014559
77 06 07.71	3302.21323	CS	B	05 02	42.796	+0.158	B	+22 47	11.73	-0.01	1.014968
77 06 10.71	3305.21363	DR	B	05 15	07.531	+0.133	B	+23 02	19.77	+0.11	1.015341
77 06 11.71	3306.21377	RR	B	05 19	16.265	+0.113	B	+23 06	34.11	+0.34	1.015455
77 06 12.71	3307.21392	RR	B	05 23	25.267	+0.148	B	+23 10	23.42	-0.01	1.015565
77 06 18.71	3313.21481	RR	B	05 48	22.092	+0.080	B	+23 24	45.32	+0.60	1.016106
77 06 28.72	3323.21630	TR	B	06 29	56.363	+0.039	B	+23 15	39.72	-0.61	1.016570
77 06 30.72	3325.21658	TR	B	06 38	13.474	+0.119	B	+23 08	54.54	-1.42	1.016613
77 07 02.72	3327.21684	RR	B	06 46	29.545	+0.146		+23 00			1.016643
77 07 03.72	3328.21697	CS	B	06 50	37.079	+0.075	B	+22 55	45.67	-1.62	1.016653
77 07 04.72	3329.21709	RR	B	06 54	44.440	+0.130	B	+22 50	35.58	-0.65	1.016659
77 07 05.72	3330.21721	TC	B	06 58	51.400	+0.091	B	+22 45	00.82	-0.48	1.016661

MERCURY

75 05 08.77	2541.26639	RM	C	04 19	10.526	+0.063	C	+23 48	27.90	-0.03	1.015682
75 07 21.68	2615.18321	RR	C	07 10	48.894	+0.243	C	+22 54	27.53	-0.80	1.218927
75 07 22.69	2616.18652	TR	C	07 19	32.172	+0.267	C	+22 49	25.22	-0.83	1.236799
75 07 24.69	2618.19336	SG	C	07 37	18.499	+0.297	C	+22 31	19.41	-2.21	1.268946
75 07 26.70	2620.20037	TR	C	07 55	18.821	+0.272	C	+22 02	27.63	-0.30	1.295822
75 08 08.74	2633.24086	SG	C	09 45	02.062	+0.243		+15 20			1.344536
75 08 09.74	2634.24330	RR	C	09 52	29.685	+0.185	C	+14 39	42.85	-1.25	1.341113
75 08 19.76	2644.26223	RM	C	10 59	14.927	+0.190	C	+07 23	29.39	-0.47	1.274745
75 08 27.77	2652.27145	RM	C	11 44	06.703	+0.010	C	+01 32	28.74	-1.29	1.193230
75 08 28.77	2653.27230	RR	C	11 49	16.784	+0.129	C	+00 49	55.39	-1.47	1.181736
75 09 14.78	2670.27628	RR	C	13 02	02.454	-0.006	C	-09 33	12.33	-2.60	0.948690
75 10 21.66	2707.15950	EH	C	12 39	17.500	+0.026	C	-02 30	55.07	-0.44	0.886684
75 10 22.66	2708.15854	HC	C	12 41	51.275	+0.060	C	-02 37	40.30	-0.78	0.914332
75 10 23.66	2709.15792	TR	C	12 44	54.262	+0.175	C	-02 49	08.18	-1.07	0.942169
75 10 31.66	2717.16133	HD	C	13 21	22.311	+0.209	C	-06 19	53.76	-1.90	1.149672
75 11 04.67	2721.16611	HD	C	13 44	02.126	+0.130	C	-08 46	30.52	-2.14	1.233160
75 11 08.67	2725.17172	RR	C	14 07	54.176	+0.216	C	-11 19	02.65	-1.25	1.301069
75 11 11.68	2728.17623	SG	C	14 26	15.300	+0.195	C	-13 11	54.47	-1.83	1.342402
75 11 15.68	2732.18254	TR	C	14 51	08.174	+0.208	C	-15 35	45.62	-1.52	1.385926
75 11 16.68	2733.18416	RR	C	14 57	25.159	+0.172	C	-16 10	07.27	-0.64	1.394893
75 11 17.69	2734.18580	HC	C	15 03	43.699	+0.237	C	-16 43	45.90	-0.64	1.403137
75 11 18.69	2735.18746	HD	C	15 10	03.586	+0.186	C	-17 16	38.83	-1.35	1.410677
75 11 19.69	2736.18913	SG	C	15 16	24.969	+0.151	C	-17 48	42.46	-1.34	1.417531
75 12 20.75	2767.24944	RR	C	18 45	43.337	+0.069	C	-25 14	04.81	+1.69	1.329009
76 01 04.77	2782.27398	RR	C	20 20	17.857	+0.172	C	-20 54	52.80	+0.98	1.048794
76 01 09.77	2787.27407	EH	C	20 40	08.340	-0.019	C	-18 43	58.25	+1.18	0.918416
76 01 10.77	2788.27305	RR	C	20 42	36.260	+0.030	C	-18 19	10.11	+0.75	0.891664
76 01 14.76	2792.26428	TR	C	20 45	42.610	-0.057	C	-16 56	14.75	-0.75	0.789483
76 01 15.76	2793.26078	SG	C	20 44	36.295	-0.123	C	-16 41	20.57	+0.53	0.766540
76 02 08.65	2817.15374	RR	C	19 44	39.896	+0.114	C	-19 27	11.63	+0.40	0.843130
76 02 12.65	2821.15083	TR	C	19 56	14.264	+0.189		-19 43			0.911371
76 02 14.65	2823.15052	RR	C	20 03	40.384	+0.120	C	-19 44	09.21	+0.43	0.944666
76 02 17.65	2826.15114	HD	C	20 16	23.610	+0.229		-19 36			0.992895
76 02 20.65	2829.15278	RM	C	20 30	35.156	+0.208	C	-19 17	34.84	+1.93	1.038678
76 02 23.66	2832.15519	EH	C	20 45	54.276	+0.195	C	-18 47	10.08	-0.09	1.081783

MERCURY

Date	J.E.D.	O	L	Obs.	R.A.	(O-C)	L	Obs.	Decl.	(O-C)	Distance
244		h m s			s		° ' "			"	
76 02 24.66	2833.15614	SG	C	20 51	12.882	+222	C	-18 34	23.92	+2.42	1.095538
76 02 27.66	2836.15933	EH	C	21 07	38.659	+188	C	-17 48	29.79	+0.21	1.134935
76 03 05.67	2843.16831	TR		21 48			C	-15 16	08.60	+2.58	1.215948
76 03 07.67	2845.17119	RR	C	22 00	15.158	+196	C	-14 21	08.04	+0.97	1.236260
76 03 11.68	2849.17728	SG	C	22 24	49.319	+135	C	-12 15	55.75	-0.31	1.272950
76 03 20.69	2858.19266	TR	C	23 22	30.871	+270	C	-06 22	02.51	+0.24	1.333497
76 03 24.70	2862.20036	RM	C	23 49	23.598	+228	C	-03 14	15.01	+2.28	1.347770
76 04 05.73	2874.22742	SG	C	01 15	47.182	+269		+07 33			1.311519
76 04 06.73	2875.22992	EH	C	01 23	20.137	+283		+08 29			1.301099
76 04 07.73	2876.23243	TR	C	01 30	54.512	+225	C	+09 25	38.19	+2.00	1.289322
76 04 10.74	2879.23999	TR	C	01 53	38.638	+234	C	+12 09	58.46	+1.38	1.245805
76 04 13.75	2882.24731	EH	C	02 16	02.183	+183	C	+14 43	50.32	+1.17	1.190676
76 04 14.75	2883.24963	RM	C	02 23	19.839	+088	C	+15 31	49.49	+1.58	1.170043
76 04 16.75	2885.25401	TR	C	02 37	32.600	+181	C	+17 01	43.17	+1.18	1.126030
76 04 17.76	2886.25604	RR	C	02 44	24.982	+159	C	+17 43	21.42	+1.52	1.102901
76 04 18.76	2887.25794	TR	C	02 51	06.492	+165	C	+18 22	36.48	+0.82	1.079200
76 04 19.76	2888.25971	RM	C	02 57	35.847	+068	C	+18 59	24.83	+0.82	1.055062
76 04 24.77	2893.26604	RR	C	03 26	27.309	+053	C	+21 25	02.29	+1.44	0.932243
76 06 24.65	2954.15460	RR	C	04 46	02.750	+214	C	+20 15	40.02	+0.52	1.014178
76 06 26.66	2956.15806	RR	C	04 58	55.538	+189	C	+21 00	00.68	+1.01	1.056917
76 06 27.66	2957.16007	TR	C	05 05	45.881	+249	C	+21 21	27.71	-0.64	1.078168
76 06 28.66	2958.16226	SG	C	05 12	51.918	+198	C	+21 42	15.06	+0.02	1.099231
76 07 02.67	2962.17277	TR		05 43			C	+22 54	31.03	+1.47	1.179718
76 07 17.73	2977.22652	RR	C	08 00	34.596	+197	C	+22 15	08.30	-1.35	1.336877
76 07 20.74	2980.23664	TR	C	08 27	00.222	+138	C	+20 59	32.49	-0.29	1.333317
76 07 21.74	2981.23979	EH	C	08 35	29.939	+145	C	+20 30	26.22	-2.07	1.330034
76 07 25.75	2985.25121	RR	C	09 07	45.586	+212	C	+18 18	45.62	-1.94	1.308375
76 07 26.75	2986.25376	TR	C	09 15	23.182	+172	C	+17 42	42.92	-0.66	1.301165
76 08 04.77	2995.27158	EH	C	10 16	35.653	+105	C	+11 45	45.07	-1.76	1.214721
76 08 05.77	2996.27303	TR	C	10 22	37.985	+022	C	+11 04	09.93	-2.20	1.203373
76 08 10.78	3001.27889	RR	C	10 50	48.736	+066	C	+07 35	56.04	-1.37	1.143101
76 08 16.78	3007.28304	SG	C	11 20	27.539	+068	C	+03 32	41.86	-1.65	1.064491
76 08 17.78	3008.28344	EH	C	11 24	58.175	+023	C	+02 53	35.73	-2.27	1.050828
76 08 18.78	3009.28374	RR	C	11 29	21.468	+117	C	+02 15	03.93	-1.86	1.037018
76 08 20.78	3011.28409	SG	C	11 37	44.833	+001	C	+00 59	52.74	-2.13	1.008979
76 08 21.78	3012.28413	RR	C	11 41	44.863	+094	C	+00 23	22.05	-1.23	0.994762
76 08 30.78	3021.27974	TC	C	12 10	52.725	-034	C	-04 20	27.60	-1.53	0.862349
76 09 06.77	3028.26829	RR	C	12 21	56.721	-206	C	-06 32	16.91	-1.36	0.759804
76 09 08.76	3030.26321	CS	C	12 22	29.816	-158	C	-06 47	33.43	-1.36	0.732640
76 09 13.75	3035.24619	SG	C	12 17	38.388	-239	C	-06 25	48.14	+1.76	0.675295
76 10 05.66	3057.16205	EJ	C	11 42	52.572	+108	C	+03 05	14.92	-0.00	0.907994
76 10 10.66	3062.16241	RR	C	12 03	06.773	+208	C	+01 38	32.01	-0.22	1.048039
76 10 12.66	3064.16408	TR	C	12 13	24.824	+206	C	+00 39	43.14	-0.01	1.100796
76 10 13.67	3065.16513	EJ	C	12 18	52.569	+218	C	+00 06	33.45	-0.71	1.125922
76 10 14.67	3066.16630	TC	C	12 24	30.060	+166	C	-00 28	38.26	-0.54	1.150098
76 10 15.67	3067.16756	RB	C	12 30	15.717	+184	C	-01 05	35.12	-1.46	1.173268
76 10 22.68	3074.17782	EJ	C	13 12	40.668	+205	C	-05 51	42.39	-2.48	1.305709
76 10 23.68	3075.17938	CS	C	13 18	52.730	+165	C	-06 34	11.43	-2.35	1.320465
76 10 28.69	3080.18730	TR	C	13 50	00.838	+081	C	-10 04	14.81	-1.65	1.380226
76 10 29.69	3081.18889	EJ	C	13 56	15.239	+150	C	-10 45	12.55	-1.61	1.389582
76 10 31.69	3083.19207	RR	C	14 08	44.372	+160	C	-12 05	34.50	-1.42	1.405923
76 11 01.69	3084.19367	CS	C	14 14	59.175	+110	C	-12 44	52.72	-1.03	1.412960
76 11 13.71	3096.21332	RR		15 30			C	-19 37	32.85	-1.80	1.445826
76 11 14.72	3097.21503	EH	C	15 37	05.342	+231	C	-20 06	10.10	-0.45	1.444659
76 11 16.72	3099.21849	TR	C	15 49	57.984	+160	C	-21 00	23.97	+2.40	1.440634

MERCURY

Date	J.E.D.	O	L	Obs.	R.A.	(O-C)	L	Obs.	Decl.	(O-C)	Distance
	244			h m s	s			° ' "	"		
76 11 18.72	3101.22201	EH	C	16 02	55.999	+0.214	C	-21 50	37.20	-3.62	1.434366
76 11 19.72	3102.22379	TC	C	16 09	27.057	+0.274	C	-22 13	59.08	+1.14	1.430391
76 11 27.74	3110.23857	TR	C	17 02	19.483	+0.098		-24 39			1.378051
76 12 01.75	3114.24618	TR	C	17 29	05.396	+0.171	C	-25 22	18.52	+0.93	1.337536
76 12 05.75	3118.25374	RR	C	17 55	46.783	+0.222	C	-25 42	51.47	+0.02	1.286623
76 12 09.76	3122.26095	EH	C	18 21	57.900	+0.275	C	-25 40	17.92	+1.22	1.224502
76 12 13.77	3126.26732	BK	C	18 46	55.761	+0.146	C	-25 14	27.16	+0.53	1.150451
76 12 18.77	3131.27282	CS	C	19 14	34.464	+0.109	C	-24 11	37.51	+1.69	1.041049
76 12 22.77	3135.27354	CS	C	19 31	23.006	+0.125	C	-23 02	53.40	+1.03	0.942456
76 12 28.76	3141.26339	CS	C	19 40	23.461	-0.017	C	-21 13	36.72	+0.92	0.792951
77 01 31.65	3175.15152	TC	C	19 12	54.674	+0.237	C	-21 48	20.03	+1.40	1.045356
77 02 02.65	3177.15302	SG	C	19 22	57.029	+0.181	C	-21 48	37.46	+1.30	1.077193
77 02 07.66	3182.15821	TC	C	19 50	09.346	+0.180		-21 29			1.149709
77 02 08.66	3183.15944	EJ	C	19 55	52.858	+0.287	C	-21 22	29.54	+0.51	1.162993
77 03 09.71	3212.20831	TC	C	23 00	47.068	+0.138	C	-08 29	05.26	+3.10	1.369758
77 03 24.74	3227.24057	SG	C	00 46	30.122	+0.139	C	+04 44	10.63	+1.46	1.267499
77 03 25.74	3228.24277	TC	C	00 53	37.453	+0.173	C	+05 40	55.31	+2.29	1.251358
77 03 26.74	3229.24494	CS	C	01 00	41.933	+0.165	C	+06 37	13.12	+0.97	1.233907
77 03 29.75	3232.25113	EJ	C	01 21	27.385	+0.178	C	+09 21	23.59	+0.94	1.174078
77 03 31.75	3234.25483	RR	C	01 34	41.320	+0.040	C	+11 04	29.10	+1.03	1.128690
77 04 01.76	3235.25651	CS	C	01 41	03.445	+0.134	C	+11 53	25.48	+0.67	1.104659
77 04 03.76	3237.25944	RR	C	01 53	10.456	+0.085	C	+13 25	05.27	+1.44	1.054586
77 04 07.76	3241.26317	RR	C	02 14	19.914	+0.029	C	+15 58	48.74	+0.46	0.950498
77 04 08.76	3242.26359	EJ	C	02 18	52.118	+0.080	C	+16 30	22.05	+0.28	0.924499
77 04 09.76	3243.26376	RR	C	02 23	04.108	-0.008	C	+16 58	59.79	+0.07	0.898777
77 04 11.76	3245.26339	EH	C	02 30	24.872	+0.016	C	+17 47	17.05	+1.30	0.848631
77 04 12.76	3246.26282	TR	C	02 33	32.191	-0.006	C	+18 06	48.57	-0.03	0.824417
77 05 22.65	3286.14809	RR	C	02 25	34.756	+0.133	C	+10 42	08.71	+0.85	0.732417
77 05 26.65	3290.14533	SG	C	02 37	21.088	-0.139	C	+11 37	33.34	+0.99	0.796314
77 05 27.65	3291.14502	RR	C	02 40	50.906	+0.120	C	+11 55	38.89	+1.31	0.813201
77 05 28.64	3292.14485	CS	C	02 44	33.193	+0.123	C	+12 15	12.84	-0.27	0.830415
77 06 03.65	3298.14688	RB	C	03 11	07.788	+0.025	C	+14 39	05.64	+1.66	0.939474
77 06 04.65	3299.14771	CS	C	03 16	16.923	+0.167	C	+15 06	32.64	+1.14	0.958412
77 06 07.65	3302.15109	CS	C	03 32	59.228	+0.226	C	+16 32	52.20	+0.74	1.015991
77 06 08.65	3303.15251	EH	C	03 38	58.790	+0.149	C	+17 02	37.53	+2.05	1.035322
77 06 11.66	3306.15768	RR	C	03 58	16.717	+0.169	C	+18 33	00.40	+1.23	1.093103
77 06 12.66	3307.15972	RR	C	04 05	09.595	+0.168	C	+19 03	05.86	+1.49	1.112108
77 07 02.73	3327.22721	RR	C	07 01	28.228	+0.248	C	+24 14	18.77	-0.60	1.326822

VENUS

75 05 10.83	2543.33421	RR	1	06 04	58.658	+0.080	S	+25 49	48.41	-0.44	1.013077
75 05 11.83	2544.33494	RR	1	06 09	59.101	+0.047	S	+25 50	24.60	-0.25	1.005572
75 05 14.84	2547.33711	HD	1	06 24	56.156	+0.060	S	+25 48	10.25	-0.79	0.982870
75 05 20.84	2553.34112	EH	1	06 54	23.398	+0.120	N	+25 25	54.73	-2.80	0.936686
75 05 23.84	2556.34293	SG	1	07 08	49.499	+0.126	N	+25 06	14.93	-0.95	0.913251
75 05 28.85	2561.34557	RR	1	07 32	20.799	+0.017		+24 21			0.873774
75 06 02.85	2566.34767	EH	1	07 55	05.829	+0.032	N	+23 22	31.88	-0.60	0.833870
75 06 19.85	2583.34985	EH	1	09 05	16.532	+0.083	N	+18 36	36.47	+0.23	0.696234
75 06 20.85	2584.34970	TR	1	09 09	00.060	-0.038	N	+18 16	33.13	-1.15	0.688106
75 06 21.85	2585.34952	RR	1	09 12	40.660	-0.108	N	+17 56	17.81	+1.64	0.679984
75 06 22.85	2586.34930	RR	1	09 16	18.399	-0.020	N	+17 35	42.91	-0.03	0.671868
75 06 23.85	2587.34905	HC	1	09 19	53.021	+0.021		+17 14			0.663760
75 06 24.85	2588.34876	SG	1	09 23	24.560	+0.096		+16 53			0.655662
75 07 02.85	2596.34507	SG	1	09 49	37.706	+0.011	N	+13 59	29.58	+0.14	0.591417
75 07 22.82	2616.32273	TR	1	10 36	12.783	-0.041	N	+06 40	31.31	-0.21	0.439947

VENUS

Date	J.E.D.	O	L	Obs.	R.A.	(O-C)	L	Obs.	Decl.	(O-C)	Distance
	244			h m s	s			° ' "	"		
75 07 26.82	2620.31527	TR	1	10 41	13.001	-.158	N	+05 22	51.26	-0.96	0.412623
75 07 29.81	2623.30885	RM	1	10 43	46.104	-.169	N	+04 29	18.25	-0.32	0.393169
75 07 30.81	2624.30654	EH	1	10 44	22.463	-.157		+04 12			0.386911
75 08 01.80	2626.30165	HC	1	10 45	12.151	-.120	N	+03 40	43.35	-0.32	0.374767
75 08 04.79	2629.29363	RM	1	10 45	26.585	-.215	N	+02 58	03.81	-1.47	0.357576
75 08 08.78	2633.28158	SG	1	10 43	49.019	-.130	N	+02 12	16.99	+1.15	0.336844
75 08 09.78	2634.27832	RR	1	10 43	03.079	-.282	N	+02 03	03.54	+1.23	0.332100
75 08 12.77	2637.26795	SG	1	10 39	54.665	-.191	N	+01 41	19.60	+1.05	0.319042
75 08 18.74	2643.24476	EH	1	10 30	04.397	-.255	N	+01 27	11.03	+1.05	0.298966
75 08 19.74	2644.24062	RM	1	10 28	02.653	-.139	N	+01 28	48.90	+1.61	0.296494
75 08 27.71	2652.20606	RM	2	10 09	40.955	-.321	N	+02 19	56.67	+1.38	0.286761
75 08 28.70	2653.20170	RR	2	10 07	19.986	-.120	N	+02 30	26.40	+2.80	0.286843
75 08 30.69	2655.19307	RR	2	10 02	44.935	-.131	N	+02 53	21.74	+2.11	0.287876
75 09 13.64	2669.14068	TR	2	09 42	18.489	-.076	S	+05 57	32.28	+0.74	0.324554
75 09 17.63	2673.12934	TR	2	09 41	41.792	-.062	S	+06 41	27.15	+1.14	0.342862
75 09 27.61	2683.10810	TR	2	09 50	26.904	-.039	S	+07 48	31.84	+0.06	0.398894
75 09 29.60	2685.10492	HD	2	09 53	44.704	+.047	S	+07 53	47.16	-0.24	0.411425
75 10 03.60	2689.09945	HD	2	10 01	37.159	+.220	S	+07 56	00.22	-0.63	0.437451
75 10 04.60	2690.09825	TR	2	10 03	49.628	+.074	S	+07 54	52.05	+0.28	0.444131
75 10 12.59	2698.09066	RR	2	10 24	24.925	+.168	S	+07 21	58.91	-1.59	0.499556
75 10 13.59	2699.08993	RR	2	10 27	18.096	+.085	S	+07 15	02.13	-0.96	0.506690
75 10 14.59	2700.08924	TR	2	10 30	14.962	+.093	S	+07 07	29.69	+0.43	0.513863
75 10 15.59	2701.08859	HC	2	10 33	15.260	+.079	S	+06 59	18.97	-0.51	0.521070
75 10 21.59	2707.08545	EH	2	10 52	21.989	+.090	S	+05 58	16.51	+0.10	0.564934
75 10 22.59	2708.08503	HC	2	10 55	42.828	+.174	S	+05 46	09.22	-1.54	0.572330
75 10 29.58	2715.08287	EH	2	11 20	10.998	+.124	S	+04 07	34.16	-0.97	0.624535
75 10 31.58	2717.08245	HD	2	11 27	28.056	+.189	S	+03 35	16.71	-1.32	0.639543
75 11 01.58	2718.08227	RR	2	11 31	09.086	+.207	S	+03 18	29.84	-2.21	0.647054
75 11 03.58	2720.08197	TR	2	11 38	35.737	+.129	S	+02 43	49.06	-0.00	0.662090
75 11 04.58	2721.08184	HD	2	11 42	21.382	+.185	S	+02 25	52.64	-1.04	0.669612
75 11 08.58	2725.08149	RR	2	11 57	37.493	+.236	S	+01 10	41.56	-1.69	0.699712
75 11 09.58	2726.08144	RR	2	12 01	29.549	+.067	S	+00 51	09.06	+1.79	0.707238
75 11 11.58	2728.08138	SG	2	12 09	17.786	+.202	S	+00 11	00.74	-1.78	0.722286
75 11 15.58	2732.08143	TR	2	12 25	07.906	+.145	S	-01 12	18.72	-1.42	0.752346
75 11 16.58	2733.08147	RR	2	12 29	08.298	+.175	S	-01 33	42.91	-0.51	0.759851
75 11 18.58	2735.08160	HD	2	12 37	12.334	+.197	S	-02 17	10.83	-1.22	0.774841
75 11 19.58	2736.08168	SG	2	12 41	15.944	+.158	S	-02 39	11.10	-1.21	0.782327
75 11 20.58	2737.08178	HC	2	12 45	20.754	+.229		-03 01			0.789803
75 11 22.58	2739.08200	TR	2	12 53	33.393	+.168	S	-03 46	09.97	-1.17	0.804729
75 11 23.58	2740.08213	RR	2	12 57	41.349	+.158	S	-04 08	46.26	-1.32	0.812177
75 11 26.58	2743.08260	TR	2	13 10	11.642	+.129	S	-05 17	12.07	-0.90	0.834447
75 11 28.58	2745.08298	HC	2	13 18	37.291	+.224	S	-06 03	13.55	-1.60	0.849226
75 11 29.58	2746.08318	RR	2	13 22	51.598	+.139	S	-06 26	18.30	-1.64	0.856593
75 12 05.58	2752.08468	RM	2	13 48	40.600	+.133	S	-08 44	53.37	+0.30	0.900452
75 12 06.58	2753.08497	TR	2	13 53	02.575	+.118	S	-09 07	53.23	+0.19	0.907703
75 12 07.59	2754.08528	RR	2	13 57	25.739	+.185	S	-09 30	49.50	-0.50	0.914936
75 12 10.59	2757.08628	RM	2	14 10	41.781	+.107	S	-10 39	02.97	+0.12	0.936531
75 12 11.59	2758.08664	EH	2	14 15	09.439	+.081	S	-11 01	34.62	-0.45	0.943693
75 12 12.59	2759.08701	HD	2	14 19	38.459	+.234	S	-11 23	57.37	-0.34	0.950838
75 12 17.59	2764.08908	EH	2	14 42	20.904	+.143	S	-13 13	19.30	-0.13	0.986277
75 12 18.59	2765.08954	RM	2	14 46	57.121	+.117	S	-13 34	35.52	-0.04	0.993307
75 12 20.59	2767.09050	RR	2	14 56	13.533	+.230	S	-14 16	26.28	-1.23	1.007303
75 12 22.59	2769.09152	HD	2	15 05	34.927	+.180		-14 57			1.021214
75 12 23.59	2770.09205	RR	2	15 10	17.581	+.171	S	-15 17	10.31	-0.70	1.028135
76 01 01.60	2779.09751	RR	2	15 53	39.711	+.163	S	-18 01	33.00	-1.24	1.089324

VENUS

Date	J.E.D.	O	L	Obs.	R.A.	(O-C)	L	Obs.	Decl.	(O-C)	Distance
244		h m s			s		° ' "			"	
76 01 04.60	2782.09960	RR	2	16 08	29.841	+ .346	S	-18 49	11.93	-2.04	1.109257
76 01 10.60	2788.10412	RR	2	16 38	41.024	+ .274	S	-20 11	42.70	-1.67	1.148424
76 01 14.61	2792.10738	TR	2	16 59	09.799	+ .235	S	-20 56	17.38	-0.13	1.174018
76 01 15.61	2793.10822	SG	2	17 04	19.361	+ .188		-21 06			1.180352
76 01 17.61	2795.10994	RR	2	17 14	41.298	+ .278		-21 23			1.192942
76 01 18.61	2796.11081	RR	2	17 19	53.389	+ .204	S	-21 31	52.14	-2.58	1.199196
76 01 19.61	2797.11170	RR	2	17 25	06.370	+ .239	S	-21 39	12.44	+1.27	1.205424
76 01 22.61	2800.11439	HC	2	17 40	49.333	+ .176	S	-21 57	45.36	+0.14	1.223941
76 01 23.62	2801.11530	EH	2	17 46	04.983	+ .236	S	-22 02	41.30	-0.13	1.230056
76 01 24.62	2802.11622	TR	2	17 51	21.083	+ .204	S	-22 06	56.39	+2.44	1.236142
76 01 28.62	2806.11994	HD	2	18 12	29.875	+ .228	N	-22 17	45.62	-1.40	1.260188
76 01 29.62	2807.12088	SG	2	18 17	47.831	+ .223	N	-22 18	47.32	+0.82	1.266123
76 02 08.63	2817.13029	RR	2	19 10	48.471	+ .235	N	-21 53	14.02	+1.44	1.323819
76 02 10.63	2819.13214	RM	2	19 21	21.852	+ .125	N	-21 40	13.94	+2.90	1.335002
76 02 14.64	2823.13578	RR	2	19 42	23.038	+ .155	N	-21 06	36.34	+1.44	1.357017
76 02 16.64	2825.13755	RR	2	19 52	50.048	+ .198		-20 46			1.367849
76 02 19.64	2828.14015	HD	2	20 08	25.156	+ .217	N	-20 10	30.69	+1.53	1.383872
76 02 21.64	2830.14184	RR	2	20 18	44.614	+ .214	N	-19 43	50.71	+3.13	1.394401
76 02 23.64	2832.14349	EH	2	20 29	00.610	+ .209	N	-19 14	56.15	+0.75	1.404800
76 02 24.64	2833.14430	SG	2	20 34	07.225	+ .180	N	-18 59	35.11	+2.71	1.409952
76 02 25.65	2834.14510	TR	2	20 39	12.834	+ .096	N	-18 43	45.06	+0.63	1.415071
76 02 27.65	2836.14666	EH	2	20 49	21.405	+ .197	N	-18 10	23.09	+1.56	1.425208
76 02 29.65	2838.14818	RR	2	20 59	25.826	+ .163	N	-17 34	54.83	+3.57	1.435212
76 03 05.65	2843.15176	TR		21 24			N	-15 57	47.31	+0.62	1.459638
76 03 07.65	2845.15311	RR	2	21 34	08.816	+ .298	N	-15 15	39.28	+3.95	1.469175
76 03 11.66	2849.15566	SG	2	21 53	35.927	+ .155	N	-13 46	32.01	+1.29	1.487851
76 03 14.66	2852.15745	RR	2	22 08	00.822	+ .183		-12 35			1.501513
76 03 15.66	2853.15802	EH	2	22 12	47.160	+ .165		-12 11			1.506001
76 03 18.66	2856.15969	RM	2	22 27	00.657	+ .041		-10 56			1.519264
76 03 20.66	2858.16074	TR	2	22 36	25.547	+ .147	N	-10 04	50.79	+0.18	1.527933
76 03 22.66	2860.16177	EH	2	22 45	47.064	+ .078	N	-09 12	14.77	+0.33	1.536461
76 03 26.66	2864.16371	EH	2	23 04	21.509	+ .117	N	-07 24	05.20	+2.83	1.553072
76 03 28.66	2866.16463	RR	2	23 13	34.876	+ .216	N	-06 28	44.95	+3.50	1.561151
76 04 01.67	2870.16641	RM	2	23 31	54.721	+ .093	N	-04 36	05.10	+0.70	1.576840
76 04 03.67	2872.16726	RR	2	23 41	02.086	+ .211	N	-03 38	52.20	+1.76	1.584450
76 04 05.67	2874.16810	SG	2	23 50	07.878	+ .213	N	-02 41	14.00	+2.05	1.591900
76 04 06.67	2875.16852	EH	2	23 54	40.337	+ .231	N	-02 12	17.16	+1.88	1.595565
76 04 07.67	2876.16893	TR	2	23 59	12.456	+ .155	N	-01 43	17.02	+0.62	1.599191
76 04 09.67	2878.16974	HC	2	00 08	16.194	+ .118	N	-00 45	02.76	+1.58	1.606323
76 04 10.67	2879.17015	TR	2	00 12	47.918	+ .178	N	-00 15	53.24	+0.61	1.609829
76 04 13.67	2882.17136	EH	2	00 26	22.482	+ .123	N	+01 11	45.59	+0.83	1.620108
76 04 14.67	2883.17176	RM	2	00 30	54.016	+ .106	N	+01 40	58.76	+0.95	1.623454
76 04 15.67	2884.17217	HC	2	00 35	25.699	+ .150	N	+02 10	10.88	+1.05	1.626759
76 04 16.67	2885.17258	TR	2	00 39	57.463	+ .149	N	+02 39	20.46	+0.39	1.630023
76 04 17.67	2886.17298	RR	2	00 44	29.381	+ .148	N	+03 08	28.90	+0.99	1.633244
76 04 18.67	2887.17339	TR	2	00 49	01.534	+ .168	N	+03 37	32.56	-0.05	1.636423
76 04 19.67	2888.17381	RM	2	00 53	33.853	+ .110	N	+04 06	34.78	+1.25	1.639560
76 04 20.67	2889.17422	EH	2	00 58	06.514	+ .110	N	+04 35	30.18	+0.37	1.642652
76 04 24.68	2893.17593	RR	2	01 16	20.823	+ .185	N	+06 30	16.62	+1.33	1.654572
76 05 08.68	2907.18276	RR	2	02 21	24.290	+ .210	N	+12 49	50.19	+0.76	1.690310
76 05 09.68	2908.18332	RR	2	02 26	09.008	+ .214	N	+13 15	04.72	+1.81	1.692495
76 05 12.69	2911.18505	HD	2	02 40	28.868	+ .194	N	+14 28	47.90	+1.32	1.698755
76 05 20.69	2919.19021	HC	2	03 19	27.836	+ .148	N	+17 29	00.07	-0.98	1.713224
76 05 22.69	2921.19162	TR	2	03 29	23.629	+ .105	N	+18 09	49.37	-0.62	1.716314
76 05 24.69	2923.19309	TR	2	03 39	23.946	+ .047	N	+18 48	44.11	-1.53	1.719185

SIX-INCH TRANSIT CIRCLE OBSERVATIONS OF THE SUN, MOON, AND PLANETS 15

VENUS

Date	J.E.D.	O	L	Obs.	R.A.	(O-C)	L	Obs.	Decl.	(O-C)	Distance
	244			h m s	s			° ' "	"		
76 06 06.70	2936.20386	EH	2	04 46	11.982	+0.010	N	+22 09	37.34	+0.74	1.732321
76 07 09.74	2969.23576	TR		07 42			S	+22 23	02.67	+3.06	1.721557
76 07 12.74	2972.23846	TR	1	07 58	06.174	+0.133	N	+21 47	05.50	-2.46	1.717393
76 07 13.74	2973.23934	TR	1	08 03	18.913	+0.098	N	+21 33	53.86	-0.40	1.715891
76 07 16.74	2976.24191	RM	1	08 18	51.255	+0.109		+20 50			1.711048
76 07 17.74	2977.24275	RR	1	08 23	59.902	+0.055	N	+20 34	50.76	+0.63	1.709321
76 07 19.74	2979.24437	EH	1	08 34	14.163	+0.186	N	+20 01	41.80	-2.24	1.705697
76 07 20.75	2980.24517	TR	1	08 39	19.519	+0.134	N	+19 44	17.22	-2.31	1.703801
76 07 21.75	2981.24595	EH	1	08 44	23.796	+0.133	N	+19 26	19.31	-2.27	1.701848
76 07 25.75	2985.24894	RR	1	09 04	29.273	+0.077	N	+18 09	07.27	-0.50	1.693472
76 07 26.75	2986.24966	TR	1	09 09	27.757	+0.104	N	+17 48	30.90	-1.23	1.691237
76 07 28.75	2988.25105	TR	1	09 19	21.117	+0.121	N	+17 05	51.28	-1.92	1.686600
76 07 29.75	2989.25172	RM	1	09 24	16.095	+0.208	N	+16 43	48.57	-2.67	1.684198
76 08 04.76	2995.25548	EH	1	09 53	20.839	+0.105	N	+14 22	27.77	-1.83	1.668645
76 08 05.76	2996.25606	TR	1	09 58	07.671	+0.112	N	+13 57	29.02	-2.04	1.665868
76 08 10.76	3001.25877	RR	1	10 21	45.903	+0.128	N	+11 47	16.36	-1.54	1.651229
76 08 11.76	3002.25928	EH	1	10 26	26.591	+0.187	N	+11 20	12.91	-3.28	1.648154
76 08 12.76	3003.25978	RR	1	10 31	06.243	+0.149	N	+10 52	54.07	-2.41	1.645030
76 08 13.76	3004.26027	BK	1	10 35	45.112	+0.232	N	+10 25	17.69	-1.83	1.641859
76 08 17.76	3008.26212	EH	1	10 54	11.806	+0.170	N	+08 32	11.85	-1.11	1.628698
76 08 18.76	3009.26256	RR	1	10 58	46.455	+0.052	N	+08 03	19.65	-0.60	1.625290
76 08 20.76	3011.26342	SG	1	11 07	53.919	+0.047	N	+07 04	55.95	-0.84	1.618335
76 08 21.76	3012.26384	RR	1	11 12	26.713	+0.067	N	+06 35	27.40	-0.06	1.614786
76 08 22.76	3013.26425	RR	1	11 16	58.937	+0.104	N	+06 05	46.70	-0.67	1.611192
76 08 30.77	3021.26735	TC	1	11 52	59.519	+0.018	N	+02 03	25.57	-0.68	1.580797
76 08 31.77	3022.26772	EH	1	11 57	28.130	+0.059	N	+01 32	40.59	-1.38	1.576798
76 09 06.77	3028.26990	RR	1	12 24	16.526	-0.075	N	-01 32	31.24	+1.27	1.551931
76 09 07.77	3029.27026	RB	1	12 28	44.782	+0.179	N	-02 03	29.47	-3.12	1.547647
76 09 08.77	3030.27063	CS	1	12 33	12.781	+0.081	N	-02 34	19.98	-1.23	1.543326
76 09 10.77	3032.27136	EH	1	12 42	09.475	+0.103	N	-03 35	59.23	-2.86	1.534570
76 09 11.77	3033.27173	RR	1	12 46	38.034	+0.004	N	-04 06	40.62	-0.54	1.530136
76 09 12.77	3034.27211	RR	1	12 51	06.978	+0.006	N	-04 37	19.94	-0.40	1.525665
76 09 13.77	3035.27248	SG	1	12 55	36.262	+0.036	N	-05 07	54.76	-0.70	1.521159
76 09 14.77	3036.27287	EJ	1	13 00	05.900	+0.051	N	-05 38	25.17	-2.38	1.516616
76 09 28.78	3050.27891	TR	1	14 04	01.345	+0.053	N	-12 28	12.30	-1.81	1.449300
76 10 05.78	3057.28264	EJ	1	14 37	00.205	+0.122		-15 34			1.413156
76 10 10.79	3062.28567	RR	1	15 01	05.649	+0.102	N	-17 36	31.11	-0.52	1.386440
76 10 11.79	3063.28632	TR	1	15 05	58.096	-0.008	N	-17 59	40.54	-0.56	1.381013
76 10 12.79	3064.28698	TR	1	15 10	51.889	+0.036	N	-18 22	22.13	+0.30	1.375557
76 10 13.79	3065.28765	EJ	1	15 15	46.955	+0.157	N	-18 44	38.40	-1.36	1.370075
76 10 14.79	3066.28834	TC	1	15 20	43.046	+0.099	N	-19 06	24.24	-1.09	1.364565
76 10 15.79	3067.28904	RB	1	15 25	40.433	+0.131		-19 27			1.359028
76 10 18.79	3070.29123	TR	1	15 40	39.635	+0.032	N	-20 28	29.39	-1.75	1.342255
76 10 21.79	3073.29354	TR	1	15 55	49.749	+0.105	N	-21 24	27.33	-2.17	1.325239
76 10 22.79	3074.29434	EJ	1	16 00	55.447	+0.122	N	-21 41	57.96	-1.40	1.319513
76 10 23.80	3075.29515	CS	1	16 06	02.157	+0.022	N	-21 58	52.47	+0.47	1.313758
76 10 28.80	3080.29939	TR	1	16 31	52.283	+0.076	N	-23 14	28.36	-1.68	1.284578
76 10 29.80	3081.30027	EJ	1	16 37	05.209	+0.045	N	-23 27	41.34	-1.94	1.278662
76 11 01.80	3084.30298	CS	1	16 52	49.257	+0.094	N	-24 03	20.29	-0.89	1.260759
76 11 02.80	3085.30390	EJ	1	16 58	05.499	+0.116	N	-24 13	49.83	+1.76	1.254743
76 11 04.81	3087.30576	SG	1	17 08	40.019	+0.133	N	-24 32	50.18	+1.16	1.242637
76 11 06.81	3089.30765	RR	1	17 19	16.817	+0.077	N	-24 49	01.50	+0.90	1.230437
76 11 08.81	3091.30956	TR	1	17 29	55.618	+0.113	N	-25 02	22.81	-1.02	1.218147
76 11 10.81	3093.31149	CS	1	17 40	35.798	+0.114	N	-25 12	47.05	+0.08	1.205767
76 11 14.82	3097.31537	EH	1	18 01	58.336	+0.138	N	-25 24	49.42	+0.75	1.180747

VENUS

Date	J.E.D.	O L	Obs.	R.A.	(O-C)	L Obs.	Decl.	(O-C)	Distance
244			h m s	s		° ' "	"		
76 11 16.82	3099.31731	TR 1	18 12	39.489	+0.47	N -25 26	23.43	-0.83	1.168108
76 11 18.82	3101.31924	EH 1	18 23	20.002	+0.56	-25 24			1.155380
76 11 19.82	3102.32021	TC 1	18 28	39.860	+0.12	S -25 23	06.97	+2.03	1.148983
76 11 21.82	3104.32211	RR 1	18 39	18.160	+0.92	S -25 17	16.71	+1.07	1.136122
76 11 23.82	3106.32399	SG 1	18 49	54.246	+0.57	S -25 08	30.20	-0.14	1.123171
76 11 30.83	3113.33028	EJ 1	19 26	34.838	+0.119	S -24 15	05.74	-0.07	1.077137
76 12 01.83	3114.33113	TR 1	19 31	45.057	+0.153	S -24 04	38.71	+1.54	1.070476
76 12 03.83	3116.33279	BK 1	19 42	01.594	+0.061	S -23 41	47.14	+1.00	1.057092
76 12 05.83	3118.33438	RR 1	19 52	13.033	+0.194	S -23 16	16.73	+1.23	1.043631
76 12 09.84	3122.33737	EH 1	20 12	18.221	+0.166	S -22 17	41.03	+0.74	1.016487
76 12 13.84	3126.34007	BK 1	20 31	58.108	+0.055	S -21 09	30.47	+0.99	0.989059
76 12 17.84	3130.34246	EH 1	20 51	11.167	+0.055	S -19 52	31.33	-0.36	0.961355
76 12 18.84	3131.34300	CS 1	20 55	55.127	+0.113	S -19 31	57.98	+0.49	0.954386
76 12 22.84	3135.34498	CS 1	21 14	32.930	+0.190	S -18 05	01.23	+1.64	0.926331
76 12 26.85	3139.34662	RR 1	21 32	41.126	+0.046	S -16 31	09.27	-0.14	0.897993
76 12 30.85	3143.34792	TR 1	21 50	19.511	+0.064	S -14 51	09.69	+0.51	0.869387
76 12 31.85	3144.34819	CS 1	21 54	39.305	-0.018	S -14 25	20.11	-0.61	0.862197
77 01 01.85	3145.34843	RR 1	21 58	57.289	-0.040	S -13 59	10.40	-0.23	0.854994
77 01 02.85	3146.34866	RR 1	22 03	13.456	+0.004	S -13 32	43.11	-0.24	0.847775
77 01 07.85	3151.34946	RR 1	22 24	05.931	+0.029	S -11 16	25.26	+1.34	0.811498
77 01 08.85	3152.34956	RR 1	22 28	10.805	+0.012	S -10 48	28.19	+0.75	0.804207
77 01 11.85	3155.34972	CS 1	22 40	14.467	+0.097	S -09 23	24.46	+0.91	0.782280
77 01 12.85	3156.34973	RB 1	22 44	12.024	+0.127	-08 54			0.774952
77 01 15.85	3159.34964	CS 1	22 55	53.603	+0.079	S -07 27	44.85	+0.10	0.752917
77 01 26.85	3170.34765	EH 1	23 36	23.427	+0.030	S -02 02	51.28	+1.65	0.671559
77 01 27.85	3171.34734	EJ 1	23 39	52.802	+0.130	S -01 33	16.18	+1.13	0.664134
77 01 31.85	3175.34584	TC 1	23 53	28.820	-0.051	S +00 24	28.84	+1.10	0.634433
77 02 01.85	3176.34540	EH 1	23 56	47.384	-0.116	S +00 53	41.40	+0.90	0.627012
77 02 02.84	3177.34493	SG 1	00 00	03.834	-0.029	S +01 22	46.65	+0.23	0.619598
77 02 07.84	3182.34220	TC 1	00 15	49.860	-0.036	S +03 46	01.94	+0.25	0.582641
77 02 08.84	3183.34157	EJ 1	00 18	51.582	+0.044	S +04 14	09.10	+0.91	0.575283
77 03 09.80	3212.30368	TC 1	01 18	29.320	-0.161	S +15 03	22.85	+0.18	0.376643
77 03 11.80	3214.29899	EJ 1	01 19	35.717	-0.058	+15 28			0.365096
77 03 15.79	3218.28846	EJ 1	01 20	09.563	-0.233	S +16 06	02.29	-1.73	0.343558
77 03 17.78	3220.28260	EH 1	01 19	35.058	-0.225	S +16 17	59.52	-0.81	0.333678
77 03 19.78	3222.27634	CS 1	01 18	25.374	-0.269	S +16 24	51.28	-0.84	0.324475
77 03 23.76	3226.26261	TR 1	01 14	22.382	-0.220	S +16 22	02.12	-0.23	0.308359
77 03 24.76	3227.25894	SG 1	01 13	00.894	-0.338	S +16 17	38.14	-3.38	0.304860
77 03 25.76	3228.25518	TC 1	01 11	31.867	-0.352	S +16 11	47.03	-3.42	0.301590
77 03 26.75	3229.25134	CS 1	01 09	55.611	-0.364	S +16 04	26.01	-2.85	0.298557
77 03 29.74	3232.23938	EJ 1	01 04	28.926	-0.231	S +15 33	20.97	-2.28	0.290971
77 03 30.74	3233.23527	BK 1	01 02	29.207	-0.403	S +15 20	04.93	-0.74	0.288973
77 03 31.73	3234.23111	RR 1	01 00	25.512	-0.453	S +15 05	20.43	-3.71	0.287251
77 04 01.73	3235.22691	CS 1	00 58	18.816	-0.216	S +14 49	20.04	-2.50	0.285812
77 04 03.72	3237.21845	RR 1	00 53	58.567	-0.198	S +14 13	34.75	-2.30	0.283805
77 04 07.70	3241.20152	RR 2	00 45	18.002	-0.193	S +12 50	05.44	-2.73	0.283359
77 04 08.70	3242.19735	EJ 2	00 43	13.190	-0.145	S +12 27	25.88	-2.80	0.283998
77 04 09.69	3243.19322	RR 2	00 41	12.114	-0.200	S +12 04	19.10	-3.17	0.284935
77 04 12.68	3246.18119	TR 2	00 35	39.526	-0.172	S +10 53	43.07	-2.11	0.289500
77 04 21.65	3255.14966	EH 2	00 25	37.124	+0.049	+07 39			0.317651
77 04 22.65	3256.14665	EJ 2	00 25	12.752	-0.153	N +07 21	12.27	-1.51	0.321960
77 04 27.63	3261.13312	DR 2	00 25	23.308	-0.085	N +06 06	55.35	+0.11	0.346436
77 04 28.63	3262.13071	EH 2	00 25	50.912	-0.032	N +05 55	15.37	-1.21	0.351862
77 04 29.63	3263.12839	RR 2	00 26	26.593	-0.012	N +05 44	43.22	-0.46	0.357446
77 04 30.63	3264.12616	RR 2	00 27	10.191	+0.008	N +05 35	17.18	+0.63	0.363182

VENUS

Date	J.E.D.	O	L	Obs.	R.A.	(O-C)	L	Obs.	Decl.	(O-C)	Distance
244		h m s				° ' "				"	
77 05 01.62	3265.12402	RR	2	00 28	01.493	+0.003	N	+05 26	55.30	+0.71	0.369063
77 05 06.61	3270.11458	SG	2	00 34	06.381	+0.023	N	+05 00	59.05	+0.33	0.400391
77 05 08.61	3272.11134	RR	2	00 37	18.664	+0.015	N	+04 57	41.13	+0.97	0.413697
77 05 10.61	3274.10837	RR	2	00 40	54.661	+0.027	N	+04 58	06.04	+0.09	0.427375
77 05 11.61	3275.10698	RB	2	00 42	50.934	-0.023	N	+04 59	39.69	+0.61	0.434340
77 05 12.61	3276.10566	BK	2	00 44	52.597	+0.060	N	+05 02	03.74	+0.55	0.441383
77 05 13.60	3277.10439	DR	2	00 46	59.246	+0.091	N	+05 05	18.08	+1.28	0.448499
77 05 14.60	3278.10318	RR	2	00 49	10.690	+0.064	N	+05 09	17.92	-0.24	0.455682
77 05 16.60	3280.10091	TR	2	00 53	47.396	+0.064	N	+05 19	35.97	-1.14	0.470241
77 05 17.60	3281.09985	EH	2	00 56	12.309	+0.102	N	+05 25	51.89	+0.57	0.477609
77 05 20.60	3284.09695	RK	2	01 03	51.033	+0.106	N	+05 48	34.31	+0.93	0.500024
77 05 22.60	3286.09524	RR	2	01 09	15.391	+0.091	N	+06 06	45.90	+1.04	0.515199
77 05 23.59	3287.09444	CS	2	01 12	02.685	+0.030	N	+06 16	42.04	+1.15	0.522849
77 05 27.59	3291.09161	RR	2	01 23	43.884	+0.128	N	+07 01	27.63	+1.31	0.553803
77 05 28.59	3292.09099	CS	2	01 26	46.581	+0.130	N	+07 13	46.88	+1.00	0.561621
77 05 29.59	3293.09040	RR	2	01 29	52.024	+0.085	N	+07 26	30.75	+0.67	0.569465
77 06 02.59	3297.08835	SG	2	01 42	40.553	+0.118	N	+08 21	08.03	+0.96	0.601083
77 06 04.59	3299.08749	CS	2	01 49	19.789	+0.113		+08 50			0.617007
77 06 07.59	3302.08641	CS	2	01 59	36.041	+0.130	N	+09 36	06.56	+1.29	0.640992
77 06 08.59	3303.08611	EH	2	02 03	05.833	+0.090	N	+09 51	47.68	+1.36	0.649006
77 06 11.59	3306.08533	RR	2	02 13	47.904	+0.093	N	+10 39	52.72	+1.45	0.673084
77 06 12.59	3307.08511	RR	2	02 17	26.131	+0.243	N	+10 56	11.50	+1.64	0.681117
77 06 16.58	3311.08448	SG	2	02 32	17.606	+0.147	N	+12 02	21.22	+1.28	0.713255
77 06 18.58	3313.08430	RR	2	02 39	54.467	+0.089	N	+12 35	44.93	+0.92	0.729314
77 07 02.59	3327.08522	RR	2	03 36	26.222	+0.139	N	+16 23	30.19	+1.54	0.840986
77 07 03.59	3328.08543	CS	2	03 40	40.987	+0.151	N	+16 38	42.31	+0.12	0.848885
77 07 04.59	3329.08566	RR	2	03 44	57.361	+0.156	N	+16 53	43.74	+0.91	0.856768

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75 08 19.47	2643.97470	RR	B	04 04	04.047	-0.024	B	+19 30	30.56	-0.23	1.114738
75 08 20.47	2644.97369	RM	C	04 06	33.745	-0.066	C	+19 38	14.92	+0.46	1.109107
75 08 25.47	2649.96858	EH	B	04 18	53.594	+0.008	B	+20 14	31.75	+0.30	1.080726
75 08 26.47	2650.96754	RR	B	04 21	19.584	-0.024	B	+20 21	18.45	-0.52	1.075002
75 08 27.47	2651.96648	HC	B	04 23	44.880	-0.058	B	+20 27	56.18	-1.04	1.069262
75 08 28.47	2652.96542	RM	B	04 26	09.522	-0.020	B	+20 34	26.13	-0.33	1.063506
75 08 29.46	2653.96435	CS	B	04 28	33.360	-0.039	B	+20 40	46.53	-0.20	1.057734
75 08 30.46	2654.96327	RR	B	04 30	56.424	-0.052	B	+20 46	57.55	-0.43	1.051946
75 09 10.45	2665.95071	EH	B	04 56	10.573	-0.049		+21 45			0.987279
75 09 13.45	2668.94704	WD	B	05 02	41.580	-0.067	B	+21 58	54.88	-0.30	0.969385
75 09 17.44	2672.94194	TC	B	05 11	06.125	-0.058	B	+22 14	56.32	+0.30	0.945394
75 09 27.43	2682.92808	EJ	B	05 30	30.769	-0.045	B	+22 47	52.75	-0.24	0.884894
75 09 28.43	2683.92659	SG	B	05 32	18.588	-0.062	B	+22 50	43.23	+0.61	0.878816
75 09 29.43	2684.92509	RR	B	05 34	04.646	-0.092	B	+22 53	28.04	-0.01	0.872735
75 09 30.42	2685.92356	RM	B	05 35	48.805	-0.227	B	+22 56	09.40	-0.08	0.866653
75 10 01.42	2686.92201	SG	B	05 37	31.397	-0.088	B	+22 58	46.92	-0.16	0.860571
75 10 04.42	2689.91723	HD	R	05 42	27.195	-0.088		+23 06			0.842340
75 10 07.41	2692.91225	RM	B	05 47	04.625	-0.141		+23 13			0.824160
75 10 08.41	2693.91053	RR	B	05 48	32.905	-0.079	B	+23 15	42.90	-0.61	0.818121
75 10 12.40	2697.90343	WD	B	05 54	03.259	-0.053	B	+23 24	36.17	-0.59	0.794105
75 10 13.40	2698.90158	EJ	B	05 55	19.995	-0.040	B	+23 26	46.96	-0.14	0.788144
75 10 14.40	2699.89971	HC	B	05 56	34.262	-0.048		+23 28			0.782203
75 10 15.40	2700.89781	RM	B	05 57	45.991	-0.115	R	+23 31	05.35	-0.31	0.776285
75 10 20.39	2705.88785	TR	R	06 03	05.871	-0.063	B	+23 41	50.61	-0.20	0.747079
75 10 21.39	2706.88576	RM	B	06 04	01.625	-0.078		+23 44			0.741328

MARS

Date	J.E.D.	O L	Obs.	R.A.	(O-C)	L Obs.	Decl.	(O-C)	Distance
244			h m s	s		° ' "	"		
75 10 22.38	2707.88364	TR B	06 04	54.499	-.106	B +23 46	13.56	+0.40	0.735611
75 10 23.38	2708.88149	HC B	06 05	44.525	-.048	B +23 48	26.25	+0.14	0.729931
75 10 29.37	2714.86781	TC B	06 09	39.317	-.068	B +24 02	21.14	-0.43	0.696754
75 10 31.36	2716.86295	EJ B	06 10	31.230	-.120	+24 07			0.686107
75 11 01.36	2717.86046	WD B	06 10	51.965	-.173	B +24 09	50.43	+0.13	0.680874
75 11 02.36	2718.85793	EH B	06 11	09.196	-.190	B +24 12	25.54	+0.33	0.675708
75 11 03.36	2719.85536	SG B	06 11	22.908	-.139	B +24 15	03.27	+0.36	0.670612
75 11 04.35	2720.85274	RM B	06 11	32.935	-.159	B +24 17	43.71	+0.34	0.665589
75 11 05.35	2721.85009	HD B	06 11	39.393	-.076	B +24 20	26.17	-0.45	0.660643
75 11 07.34	2723.84464	EJ B	06 11	40.995	-.120	B +24 26	01.65	+0.21	0.650997
75 11 09.34	2725.83903	SG B	06 11	27.514	-.214	B +24 31	46.56	-0.30	0.641705
75 11 11.33	2727.83324	RM B	06 10	58.949	-.214	B +24 37	41.90	-0.14	0.632795
75 11 12.33	2728.83028	SG B	06 10	38.972	-.171	B +24 40	42.91	+0.05	0.628491
75 11 17.31	2733.81481	RR B	06 08	01.433	-.106	B +24 56	12.18	+0.45	0.608652
75 11 18.31	2734.81158	RM B	06 07	18.403	-.168	B +24 59	20.83	+0.26	0.605045
75 11 19.31	2735.80831	CS B	06 06	31.614	-.218	B +25 02	29.48	-0.25	0.601569
75 11 20.30	2736.80500	EJ B	06 05	41.197	-.163	B +25 05	38.75	-0.07	0.598226
75 11 22.30	2738.79824	TR B	06 03	49.125	-.229	B +25 11	55.58	+0.28	0.591956
75 11 23.29	2739.79480	SG B	06 02	47.741	-.184	B +25 15	01.41	-0.38	0.589038
75 11 25.29	2741.78780	HC B	06 00	34.286	-.238	+25 21			0.583656
75 11 26.28	2742.78424	RR B	05 59	22.494	-.224	B +25 24	09.23	+0.21	0.581201
75 11 29.27	2745.77334	EH B	05 55	27.937	-.180	B +25 32	47.44	+0.21	0.574828
75 12 02.26	2748.76215	RM B	05 51	07.400	-.175	B +25 40	42.96	+0.32	0.570034
75 12 03.26	2749.75835	CS B	05 49	35.503	-.202	B +25 43	09.54	+0.23	0.568804
75 12 05.25	2751.75070	EJ B	05 46	25.356	-.206	+25 47			0.566916
75 12 06.25	2752.74684	DR B	05 44	47.486	-.193	B +25 49	47.80	+0.25	0.566264
75 12 11.23	2757.72731	CS B	05 36	18.624	-.252	B +25 58	11.70	+0.11	0.565998
75 12 12.22	2758.72338	TC B	05 34	34.536	-.264	B +25 59	26.30	+0.03	0.566555
75 12 17.20	2763.70373	SG B	05 25	55.069	-.261	B +26 03	26.16	-0.08	0.572425
75 12 18.20	2764.69982	EH B	05 24	12.925	-.237	B +26 03	48.39	+0.15	0.574217
75 12 19.20	2765.69593	RB B	05 22	31.750	-.307	+26 04			0.576214
75 12 23.18	2769.68050	RM B	05 16	01.932	-.285	B +26 03	39.82	-0.55	0.586236
75 12 24.18	2770.67670	TC B	05 14	29.077	-.238	B +26 03	17.39	-0.19	0.589244
76 01 02.14	2779.64382	TC B	05 02	29.168	-.174	B +25 56	11.83	-0.17	0.625031
76 01 05.13	2782.63350	DR B	04 59	25.216	-.312	+25 53			0.640242
76 01 10.12	2787.61714	CS B	04 55	30.004	-.197	+25 47			0.668854
76 01 13.11	2790.60782	HC B	04 53	52.480	-.203	B +25 44	44.98	-0.64	0.687813
76 01 15.10	2792.60182	TR B	04 53	05.630	-.175	B +25 43	00.26	-0.36	0.701136
76 01 18.09	2795.59312	TR B	04 52	22.045	-.131	B +25 40	45.44	+0.23	0.722074
76 01 20.09	2797.58753	DR B	04 52	10.262	-.189	+25 39			0.736631
76 01 24.08	2801.57680	EH B	04 52	27.050	-.199	B +25 37	44.04	-0.33	0.767076
76 01 25.07	2802.57421	HC B	04 52	39.400	-.209	B +25 37	26.46	+0.08	0.774947
76 01 29.06	2806.56422	RM B	04 54	00.162	-.205	B +25 36	49.08	-0.05	0.807386
76 02 07.04	2815.54370	TC B	04 59	51.754	-.162	B +25 38	24.22	-0.04	0.885138
76 02 08.04	2816.54158	CS B	05 00	44.140	-.110	B +25 38	46.92	-0.28	0.894115
76 02 10.04	2818.53741	RM B	05 02	36.071	-.125	B +25 39	38.14	-0.28	0.912244
76 02 13.03	2821.53136	TR B	05 05	41.363	-.131	+25 41			0.939828
76 02 15.03	2823.52745	WD B	05 07	55.763	-.173	B +25 42	09.56	-0.63	0.958456
76 02 21.02	2829.51627	WD B	05 15	27.011	-.117	B +25 45	27.46	-0.37	1.015331
76 02 24.01	2832.51097	RM B	05 19	37.554	-.032	B +25 47	00.34	+0.12	1.044253
76 02 26.01	2834.50754	TR B	05 22	33.003	-.072	B +25 47	55.71	-0.39	1.063685
76 02 28.00	2836.50418	WD B	05 25	34.980	-.048	B +25 48	44.82	-0.57	1.083221
76 03 01.00	2838.50089	RB B	05 28	43.085	-.090	+25 49			1.102847
76 03 02.00	2839.49927	TR B	05 30	19.397	-.083	B +25 49	42.99	-0.80	1.112690
76 03 04.99	2842.49451	TR B	05 35	16.803	-.111	B +25 50	18.91	-0.45	1.142317

SIX-INCH TRANSIT CIRCLE OBSERVATIONS OF THE SUN, MOON, AND PLANETS 19

MARS

Date	J.E.D.	O	L	Obs.	R.A.	(O-C)	L	Obs.	Decl.	(O-C)	Distance
244											
				"	m	s			"		
76 03 07.99	2845.48989	RE	B	05 40	26.306	-.091	B	+25 50	27.03	-0.49	1.172057
76 03 10.99	2848.48540	HD	B	05 45	46.924	-.049	B	+25 50	03.74	-0.26	1.201870
76 03 11.98	2849.48393	SG	B	05 47	36.077	-.058	B	+25 49	48.01	-0.27	1.211818
76 03 14.98	2852.47959	HC	B	05 53	09.989	-.065		+25 48			1.241678
76 03 18.97	2856.47397	DR	B	06 00	49.158	-.052		+25 45			1.281498
76 03 19.97	2857.47259	WD	B	06 02	46.280	-.044	B	+25 45	01.86	-0.06	1.291450
76 03 20.97	2858.47122	RR	B	06 04	44.235	-.083	B	+25 44	03.74	-0.02	1.301399
76 03 21.97	2859.46987	RC	B	06 06	43.094	-.087	B	+25 43	00.50	+0.20	1.311346
76 03 22.97	2860.46852	RB	B	06 08	42.827	-.066		+25 41			1.321288
76 03 23.97	2861.46718	TR	B	06 10	43.380	-.055	B	+25 40	36.84	+0.09	1.331224
76 03 24.97	2862.46585	HD	B	06 12	44.752	-.025	B	+25 39	16.03	-0.33	1.341155
76 03 26.96	2864.46322	TC	B	06 16	49.753	-.027	B	+25 36	17.82	-0.19	1.360991

JUPITER

75 07 23.44	2616.94206	TR	B	01 30	29.906	+0.026	B	+08 00	16.83	+1.63	4.741042
75 07 26.43	2619.93440	EH	B	01 31	16.381	+0.070	B	+08 03	55.91	+0.35	4.695657
75 07 27.43	2620.93184	SG	B	01 31	30.037	-.008	B	+08 05	01.27	+0.34	4.680596
75 07 28.43	2621.92926	HC	B	01 31	43.453	+0.055		+08 06			4.665575
75 07 29.43	2622.92667	RR	B	01 31	56.094	+0.029	B	+08 06	59.70	+0.32	4.650598
75 07 31.42	2624.92148	EH	B	01 32	19.319	-.004	B	+08 08	42.41	+1.07	4.620790
75 08 01.42	2625.91887	TC	B	01 32	29.941	+0.037	B	+08 09	26.77	+0.68	4.605967
75 08 02.42	2626.91626	WD	B	01 32	39.739	-.039	B	+08 10	07.58	+0.90	4.591203
75 08 09.40	2633.89771	WD	B	01 33	28.599	-.042	B	+08 12	53.31	+1.07	4.489886
75 08 10.40	2634.89502	CS	B	01 33	32.669	-.008	B	+08 12	59.62	+0.87	4.475756
75 08 13.39	2637.88692	TR	B	01 33	40.323	-.017	B	+08 12	53.16	+0.54	4.433983
75 08 18.37	2642.87325	SG	B	01 33	38.252	-.030	B	+08 11	17.71	+0.47	4.366668
75 08 19.37	2643.87048	RR	B	01 33	35.651	+0.012	B	+08 10	46.18	+0.77	4.353587
75 08 23.36	2647.85936	EJ	B	01 33	17.638	+0.007	B	+08 07	56.00	+0.32	4.302674
75 08 25.35	2649.85374	EH	B	01 33	04.123	-.062	B	+08 06	06.10	+0.55	4.278121
75 08 26.35	2650.85092	RR	B	01 32	56.378	+0.018	B	+08 05	04.98	+0.75	4.266085
75 08 27.35	2651.84809	HC		01 32			B	+08 03	58.43	-0.34	4.254215
75 08 28.35	2652.84525	RM	B	01 32	38.424	-.095	B	+08 02	49.60	+0.39	4.242516
75 08 29.34	2653.84241	CS	B	01 32	28.482	-.029	B	+08 01	35.95	+0.37	4.230990
75 08 30.34	2654.83955	RR	B	01 32	17.764	-.018	B	+08 00	18.55	+0.67	4.219645
75 09 10.31	2665.80762	EH	B	01 29	33.655	-.068		+07 41			4.107965
75 09 13.30	2668.79876	WD	B	01 28	35.301	-.020		+07 35			4.082136
75 09 17.29	2672.78684	TC	B	01 27	09.333	+0.001	B	+07 26	17.83	+0.36	4.051096
75 09 27.26	2682.75666	EJ	B	01 22	59.465	-.037	B	+07 00	14.30	+0.42	3.991714
75 09 28.25	2683.75361	SG	B	01 22	32.167	-.067	B	+06 57	25.82	+0.38	3.987287
75 09 29.25	2684.75056	RR	B	01 22	04.589	-.030	B	+06 54	35.55	+0.33	3.983145
75 10 01.24	2686.74445	SG	B	01 21	08.368	-.060	B	+06 48	50.51	+0.56	3.975728
75 10 04.24	2689.73526	HD	B	01 19	41.960	-.088	B	+06 40	02.38	+0.57	3.966806
75 10 05.23	2690.73220	HC	B	01 19	12.718	-.071		+06 37			3.964427
75 10 07.23	2692.72605	RM	B	01 18	13.650	-.070	B	+06 31	05.74	+1.00	3.960574
75 10 08.22	2693.72298	RR	B	01 17	43.934	-.025	B	+06 28	04.63	+0.20	3.959100
75 10 12.21	2697.71067	SG	B	01 15	43.954	+0.010	B	+06 16	01.37	+0.81	3.956248
75 10 13.21	2698.70760	RR	B	01 15	13.788	-.021	B	+06 12	59.70	+0.12	3.956297
75 10 14.20	2699.70452	HC	B	01 14	43.591	-.077		+06 09			3.956651
75 10 15.20	2700.70144	RM	B	01 14	13.453	-.088	B	+06 06	59.14	+0.53	3.957309
75 10 16.20	2701.69836	HD	B	01 13	43.421	-.033	B	+06 03	59.26	+0.38	3.958272
75 10 20.19	2705.68606	TR	B	01 11	43.876	-.072	B	+05 52	08.92	+0.74	3.965157
75 10 22.18	2707.67992	EH	B	01 10	44.938	-.081	B	+05 46	20.61	+0.86	3.970412
75 10 23.18	2708.67685	HD	B	01 10	15.795	-.041	B	+05 43	28.38	+0.64	3.973490
75 10 24.17	2709.67379	CS	B	01 09	46.843	-.027	B	+05 40	37.16	-0.22	3.976866

JUPITER

Date	J.E.D.	O	L	Obs.	R.A.	(O-C)	L	Obs.	Decl.	(O-C)	Distance
	244			h m s	s						
75 10 29.16	2714.65851	RM	B	01 07	25.931	-.060	B	+05 26	54.81	+0.08	3.998195
75 10 31.15	2716.65242	HC	B	01 06	31.819	-.044	B	+05 21	41.93	+0.34	4.008777
75 11 01.15	2717.64939	TR	B	01 06	05.282	-.080	B	+05 19	08.96	+0.02	4.014499
75 11 03.14	2719.64333	RB	B	01 05	13.554	-.039	B	+05 14	12.83	+0.65	4.026799
75 11 05.14	2721.63729	CS	B	01 04	23.541	-.069	B	+05 09	27.65	+0.02	4.040219
75 11 07.13	2723.63128	EH	B	01 03	35.519	-.041	B	+05 04	56.73	+0.55	4.054737
75 11 11.12	2727.61932	HC	B	01 02	05.727	-.041	B	+04 56	36.62	+1.00	4.086954
75 11 12.12	2728.61634	TR	B	01 01	44.643	-.078	B	+04 54	40.42	+0.60	4.095650
75 11 14.11	2730.61042	EH	B	01 01	04.359	-.049	B	+04 51	00.14	+0.20	4.113785
75 11 15.11	2731.60747	TC	B	01 00	45.137	-.031	B	+04 49	16.41	+0.37	4.123217
75 11 16.10	2732.60452	WD	B	01 00	26.484	-.070	B	+04 47	36.87	+0.61	4.132888
75 11 17.10	2733.60158	RB	B	01 00	08.540	-.040	B	+04 46			4.142792
75 11 18.10	2734.59865	HC	B	00 59	51.206	-.050	B	+04 44	29.77	+0.42	4.152925
75 11 19.10	2735.59573	EH	B	00 59	34.544	-.047	B	+04 43	01.79	-0.54	4.163284
75 11 20.09	2736.59281	SG	B	00 59	18.565	-.030	B	+04 41	39.75	+0.04	4.173867
75 11 23.08	2739.58412	WD	B	00 58	34.666	-.032	B	+04 37	58.45	-0.04	4.206908
75 11 25.08	2741.57836	RM	B	00 58	08.833	-.083	B	+04 35	54.50	+0.79	4.229974
75 11 26.08	2742.57549	HD	B	00 57	57.046	-.047	B	+04 34	58.51	+0.29	4.241807
75 11 28.07	2744.56978	CS	B	00 57	35.560	-.056	B	+04 33	22.01	+0.71	4.266052
75 11 29.07	2745.56694	RB	B	00 57	25.960	-.020	B	+04 32			4.278455
75 11 30.06	2746.56411	EJ	B	00 57	17.021	-.068	B	+04 32	03.67	+0.30	4.291041
75 12 02.06	2748.55847	EH	B	00 57	01.493	-.076	B	+04 31	03.96	-0.79	4.316736
75 12 03.06	2749.55566	HD	B	00 56	54.932	-.019	B	+04 30	43.41	+0.67	4.329837
75 12 05.05	2751.55007	TR	B	00 56	43.941	-.067	B	+04 30	13.73	+0.35	4.356520
75 12 06.05	2752.54729	TR	B	00 56	39.618	-.069	B	+04 30	06.61	+0.58	4.370091
75 12 11.03	2757.53352	CS	B	00 56	29.574	-.061	B	+04 30	42.51	+0.12	4.440050
75 12 12.03	2758.53080	TC	B	00 56	29.904	-.033	B	+04 31	04.59	+0.35	4.454427
75 12 14.03	2760.52537	WD	B	00 56	32.830	-.022	B	+04 32			4.483528
75 12 17.02	2763.51730	SG	B	00 56	42.859	-.119	B	+04 34	06.32	+0.53	4.527975
75 12 19.01	2765.51196	RB	B	00 56	53.503	-.031	B	+04 35			4.558083
75 12 20.01	2766.50930	RR	B	00 56	59.938	-.004	B	+04 36	51.86	+0.03	4.573267
75 12 21.01	2767.50665	RR	B	00 57	07.061	-.036	B	+04 37			4.588531
75 12 23.00	2769.50138	RM	B	00 57	23.568	-.068	B	+04 40	19.98	+0.30	4.619287
75 12 24.00	2770.49876	TC	B	00 57	32.969	-.043	B	+04 41	38.30	+0.17	4.634770
75 12 25.00	2771.49615	RR	B	00 57	43.088	-.036	B	+04 43	01.48	+0.38	4.650316
76 01 01.98	2779.47554	TC	B	00 59	30.134	-.055	B	+04 56	45.40	+0.47	4.776453
76 01 04.97	2782.46794	SG	B	01 00	22.021	+0.001	B	+05 03	05.13	+0.50	4.824258
76 01 08.96	2786.45793	SG	B	01 01	40.561	-.059	B	+05 12	27.90	+0.38	4.888108
76 01 09.96	2787.45545	CS	B	01 02	01.923	-.000	B	+05 14	58.08	+0.04	4.904061
76 08 18.47	3008.96582	EJ	B	03 50	17.827	+0.025	B	+19 02			4.957295
76 08 20.46	3010.96092	RR	B	03 51	06.003	-.060	B	+19 04	24.91	+0.41	4.926982
76 08 21.46	3011.95846	TC	B	03 51	29.146	-.039	B	+19 05	28.81	+0.58	4.911806
76 08 23.45	3013.95350	RR	B	03 52	13.425	+0.058	B	+19 07	28.94	+0.24	4.881440
76 08 31.43	3021.93337	TR	B	03 54	41.459	-.019	B	+19 13	57.65	+1.34	4.760340
76 09 01.43	3022.93082	RR	B	03 54	56.641	-.037	B	+19 14	34.38	+0.22	4.745311
76 09 04.42	3025.92310	TC	B	03 55	37.701	-.022	B	+19 16	14.66	+0.96	4.700469
76 09 05.42	3026.92051	TR	B	03 55	49.867	+0.001	B	+19 16	42.65	+0.47	4.685615
76 09 06.42	3027.91791	EH	B	03 56	01.189	-.041	B	+19 17	08.40	+0.12	4.670814
76 09 07.42	3028.91530	RR	B	03 56	11.819	+0.008	B	+19 17	32.47	+0.45	4.656070
76 09 08.41	3029.91268	RB	B	03 56	21.604	+0.000	B	+19 17	54.08	+0.69	4.641386
76 09 09.41	3030.91006	EH	B	03 56	30.568	-.038	B	+19 18	12.73	+0.34	4.626767
76 09 12.40	3033.90212	CS	B	03 56	52.812	-.006	B	+19 18	55.46	+0.32	4.583339
76 09 13.40	3034.89946	DR	B	03 56	58.601	-.010	B	+19 19			4.569019
76 09 14.40	3035.89679	SG	B	03 57	03.557	-.033	B	+19 19	11.85	+0.04	4.554784

JUPITER

Date	J.E.D.	O	L	Obs.	R.A.	(O-C)	L	Obs.	Decl.	(O-C)	Distance	
	244			h	m	s		°	'	"		
76 10 10.32	3061.82394	EJ	B	03	54	22.743	-.038	B +19	08	31.40	-0.00	4.229849
76 10 11.32	3062.82101	DR	B	03	54	05.663	-.100	B +19	07	35.63	-0.23	4.219665
76 10 12.32	3063.81808	RB	B	03	53	47.969	-.029	B +19	06	38.03	-0.12	4.209693
76 10 13.32	3064.81513	TR	B	03	53	29.444	-.052	B +19	05	38.69	+0.38	4.199937
76 10 15.31	3066.80922	TC	B	03	52	50.310	-.009	B +19	03	32.18	-0.12	4.181089
76 10 16.31	3067.80625	RB	B	03	52	29.686	+.024	B +19	02	26.37	+0.20	4.172007
76 10 19.30	3070.79730	DR	B	03	51	23.465	-.091	B +18	58	55.81	+0.21	4.146175
76 10 22.29	3073.78827	RR	B	03	50	11.548	+.012	B +18	55	08.09	+0.85	4.122557
76 10 23.29	3074.78525	EJ	B	03	49	46.266	-.028	B +18	53	47.58	+0.26	4.115195
76 10 27.27	3078.77310	TR	B	03	47	59.615	-.043	B +18	48	10.98	+0.80	4.088408
76 10 28.27	3079.77005	CS	B	03	47	31.616	-.059	B +18	46	41.82	+0.05	4.082392
76 10 29.27	3080.76699	TR	B	03	47	03.161	-.041	B +18	45	11.75	-0.06	4.076655
76 10 30.26	3081.76392	EJ	B	03	46	34.197	-.061	B +18	43	40.75	+0.43	4.071198
76 11 02.25	3084.75470	DR	B	03	45	04.706	-.115	B +18	38	57.31	-0.05	4.056536
76 11 06.24	3088.74234	EH	B	03	43	00.286	-.047	B +18	32	21.96	-0.44	4.041059
76 11 08.24	3090.73614	CS	B	03	41	56.153	-.104	B +18	28	58.29	-0.31	4.035101
76 11 10.23	3092.72993	EJ	B	03	40	51.168	-.037	B +18	25	31.22	-0.12	4.030349
76 11 11.23	3093.72682	CS	B	03	40	18.350	-.022	B +18	23	47.04	+0.43	4.028429
76 11 14.22	3096.71748	RR	B	03	38	38.878	-.042	B +18	18	29.07	+0.24	4.024510
76 11 17.21	3099.70813	TR	B	03	36	58.487	-.072	B +18	13	07.18	-0.11	4.023377
76 11 19.20	3101.70190	DR	B	03	35	51.493	-.006	B +18	09	32.46	+0.57	4.024184
76 11 20.20	3102.69878	TC	B	03	35	17.944	-.064	B +18	07	44.03	-0.17	4.025057
76 11 21.20	3103.69566	RB	B	03	34	44.527	-.053	B +18	05	55.84	-0.77	4.026244
76 11 23.19	3105.68943	EH	B	03	33	37.968	-.055	B +18	02	22.19	-0.02	4.029558
76 11 24.19	3106.68632	RB	B	03	33	04.954	+.008*	B +18	00	35.64	+0.05	4.031683
76 11 26.18	3108.68010	RR	B	03	31	59.278	-.038	B +17	57	04.14	+0.20	4.036868
76 11 30.17	3112.66770	CS	B	03	29	50.727	-.142	B +17	50	09.95	+0.55	4.050928
76 12 01.16	3113.66461	BK	B	03	29	19.492	+.003	B +17	48	28.42	+0.30	4.055201
76 12 02.16	3114.66152	RR	B	03	28	48.433	-.016	B +17	46	48.10	+0.12	4.059775
76 12 03.16	3115.65843	SG	B	03	28	17.711	-.060	B +17	45	09.25	+0.20	4.064647
76 12 04.16	3116.65535	RB	B	03	27	47.447	-.032	B +17	43	30.62	-0.82	4.069814
76 12 05.15	3117.65228	EH	B	03	27	17.507	-.085	B +17	41	55.13	-0.10	4.075274
76 12 06.15	3118.64921	TR	B	03	26	48.067	-.065	B +17	40	20.15	-0.36	4.081025
76 12 14.12	3126.62485	DR	B	03	23	10.020	-.043	+17	28			4.137207
76 12 15.12	3127.62183	CS	B	03	22	45.231	-.048	B +17	27	28.65	+0.50	4.145460
76 12 22.10	3134.60092	RB	B	03	20	09.819	-.000	B +17	19	30.02	-0.48	4.210423
76 12 23.10	3135.59797	TC	B	03	19	50.305	-.060	B +17	18	32.68	+0.01	4.220684
76 12 27.09	3139.58623	RR	B	03	18	39.887	-.033	B +17	15	09.39	+0.05	4.264003
76 12 28.08	3140.58332	CS	B	03	18	24.098	-.105	B +17	14	26.11	+0.38	4.275378
76 12 30.08	3142.57752	RB	B	03	17	55.066	-.039	B +17	13	07.48	+0.01	4.298749
76 12 31.07	3143.57464	TR	B	03	17	41.649	-.090	B +17	12	32.89	+0.00	4.310735
77 01 02.07	3145.56890	CS	B	03	17	17.349	-.053	B +17	11	33.10	+0.12	4.335288
77 01 03.07	3146.56604	RR	B	03	17	06.417	-.023	B +17	11	07.77	+0.05	4.347844
77 01 05.06	3148.56035	SG	B	03	16	46.867	-.083	B +17	10	26.52	-0.17	4.373494
77 01 08.05	3151.55189	TC	B	03	16	23.746	-.085	B +17	09	48.14	-0.83	4.413242
77 01 14.04	3157.53524	RB	B	03	15	59.782	-.072	B +17	10	00.47	+0.45	4.496879
77 01 16.03	3159.52976	TC	B	03	15	58.520	-.013	B +17	10	28.71	-0.81	4.525852
77 01 17.03	3160.52704	SG	B	03	15	59.079	-.048	B +17	10	47.81	-1.32	4.540521
77 01 26.00	3169.50295	TR	B	03	16	41.773	-.057	B +17	16	08.54	+0.04	4.677142
77 01 27.00	3170.50033	RR	B	03	16	50.626	-.050	B +17	16	59.01	-0.45	4.692738
77 01 29.99	3173.49250	EH	B	03	17	22.011	-.018	B +17	19	50.26	-0.09	4.739901
77 01 30.99	3174.48991	SG	B	03	17	34.031	-.036	B +17	20	52.07	-1.11	4.755732
77 01 31.99	3175.48732	EH	B	03	17	46.860	-.027	B +17	21	59.05	+0.12	4.771609
77 02 01.98	3176.48475	TC	B	03	18	00.435	-.048	B +17	23	07.65	+0.14	4.787529
77 02 02.98	3177.48218	SG	B	03	18	14.840	-.009	B +17	24	18.58	-0.32	4.803488

JUPITER

Date	J.E.D.	O	L	Obs.	R.A.	(O-C)	L	Obs.	Decl.	(O-C)	Distance
	244				h m s	s		° ' "	"	"	
77 02 05.97	3180.47454	RR	B	03 19	02.432	-0.060	B	+17 28	09.11	-0.35	4.851555
77 02 07.97	3182.46949	BK	B	03 19	37.960	-0.027	B	+17 30	56.01	-0.39	4.883720
77 02 08.97	3183.46698	SG	B	03 19	56.854	+0.013	B	+17 32	23.53	-0.19	4.899826

SATURN

75 10 20.48	2705.98177	TR	B	08 18	43.095	+0.080	B	+19 44	26.14	-0.93	9.105920
75 10 21.48	2706.97917	RM	B	08 18	54.367	+0.034	B	+19 43	55.64	-0.89	9.089513
75 10 22.48	2707.97656	TR	B	08 19	05.271	+0.039	B	+19 43	26.80	-0.54	9.073082
75 10 23.47	2708.97395	HC	B	08 19	15.734	+0.025	B	+19 42	58.72	-0.80	9.056631
75 10 29.46	2714.95819	TC	B	08 20	09.468	-0.025	B	+19 40	42.04	-0.59	8.957749
75 10 31.45	2716.95290	EJ	B	08 20	23.885	+0.014		+19 40			8.924829
75 11 01.45	2717.95024	WD	B	08 20	30.371	-0.012	B	+19 39	53.61	-0.48	8.908399
75 11 03.44	2719.94492	SG	B	08 20	42.030	-0.020	B	+19 39	28.89	-0.30	8.875622
75 11 05.44	2721.93957	HD	B	08 20	51.980	+0.081	B	+19 39	07.92	-2.48	8.842996
75 11 09.43	2725.92881	SG	B	08 21	06.085	+0.005	B	+19 38	51.19	-0.35	8.778355
75 11 11.42	2727.92340	RM	B	08 21	10.451	+0.064	B	+19 38	51.36	-0.15	8.746423
75 11 16.41	2732.90978	CS	B	08 21	12.986	-0.048	B	+19 39	18.29	-0.42	8.668043
75 11 17.41	2733.90704	RR	B	08 21	12.166	-0.013	B	+19 39	28.18	-0.62	8.652653
75 11 18.40	2734.90429	RM	B	08 21	10.771	-0.094	B	+19 39	39.60	-0.82	8.637370
75 11 19.40	2735.90154	CS	B	08 21	09.083	-0.010	B	+19 39	53.16	-0.45	8.622199
75 11 20.40	2736.89878	EJ	B	08 21	06.836	-0.027	B	+19 40	08.27	-0.07	8.607144
75 11 23.39	2739.89048	SG	B	08 20	57.413	-0.012	B	+19 41	01.34	-0.51	8.562721
75 11 26.38	2742.88214	RR	B	08 20	43.852	-0.008	B	+19 42	08.75	-0.53	8.519514
75 11 29.37	2745.87374	EH	B	08 20	26.217	+0.010	B	+19 43	30.12	-0.13	8.477661
75 11 30.37	2746.87093	WD	B	08 20	19.427	-0.002	B	+19 43	59.88	-0.30	8.464034
75 12 02.37	2748.86530	RM	B	08 20	04.476	-0.078	B	+19 45	03.79	-0.57	8.437300
75 12 03.36	2749.86248	CS	B	08 19	56.405	-0.060	B	+19 45	38.12	-0.50	8.424202
75 12 05.36	2751.85681	EJ	B	08 19	39.004	+0.009	B	+19 46	50.90	-0.44	8.398572
75 12 06.35	2752.85397	DR	B	08 19	29.566	-0.055		+19 47			8.386050
75 12 12.34	2758.83684	HC	B	08 18	24.737	-0.009	B	+19 51	46.98	-1.02	8.315290
75 12 19.32	2765.81666	EJ	B	08 16	51.702	-0.030	B	+19 57	42.68	-0.20	8.243090
75 12 23.31	2769.80503	HD	B	08 15	50.997	-0.016	B	+20 01	26.51	-2.01	8.207303
76 01 05.27	2782.76690	CS	B	08 12	02.568	+0.016	B	+20 15	06.62	-0.77	8.121530
76 01 06.26	2783.76395	RM	B	08 11	43.393	-0.019	B	+20 16	14.10	-0.17	8.116993
76 01 13.24	2790.74324	RM	B	08 09	25.353	+0.014	B	+20 24	09.98	+0.23	8.093856
76 01 15.24	2792.73732	TR	B	08 08	44.962	+0.028	B	+20 26	27.14	+0.29	8.090049
76 01 22.22	2799.71655	EJ	B	08 06	21.982	+0.007		+20 34			8.086629
76 01 24.21	2801.71062	CS	B	08 05	41.061	-0.001	B	+20 36	39.89	-0.48	8.088492
76 01 25.21	2802.70765	HC	B	08 05	20.567	-0.092		+20 37			8.089898
76 02 10.16	2818.66037	RM	B	08 00	08.970	+0.054	B	+20 54	29.34	-0.25	8.154571
76 02 11.16	2819.65743	CS	B	07 59	50.897	-0.048	B	+20 55	25.86	-0.36	8.161157
76 02 15.15	2823.64571	WD	B	07 58	41.535	-0.032		+20 59			8.190312
76 02 16.14	2824.64278	RB	B	07 58	24.934	+0.048	B	+20 59	56.66	+0.40	8.198289
76 02 19.13	2827.63404	RR	B	07 57	36.582	+0.008		+21 02			8.223822
76 02 21.13	2829.62822	WD	B	07 57	05.929	+0.022	B	+21 04	02.00	-0.36	8.242150
76 02 23.12	2831.62242	RB	B	07 56	36.532	-0.023		+21 05			8.261494
76 02 24.12	2832.61953	RM	B	07 56	22.503	+0.113	B	+21 06	16.94	-0.60	8.271539
76 02 26.11	2834.61375	TR	B	07 55	55.104	-0.012	B	+21 07	41.54	-0.75	8.292355
76 02 27.11	2835.61087	HD	B	07 55	41.979	-0.042		+21 08			8.303119
76 02 28.11	2836.60799	WD	B	07 55	29.305	+0.009	B	+21 09	02.29	-0.28	8.314115
76 02 29.11	2837.60512	CS	B	07 55	16.956	+0.008		+21 09			8.325338
76 03 01.10	2838.60225	RR	B	07 55	04.946	-0.038		+21 10			8.336784
76 03 02.10	2839.59939	TR	B	07 54	53.432	+0.021	B	+21 10	53.61	-0.72	8.348448
76 03 07.09	2844.58514	EH	B	07 54	01.637	-0.011	B	+21 13	36.63	+0.02	8.409890
76 03 08.08	2845.58230	RB	B	07 53	52.546	-0.007	B	+21 14	05.20	-0.18	8.422769

SATURN

Date	J.E.D.	O	L	Obs.	R.A.	(O-C)	L	Obs.	Decl.	(O-C)	Distance
	244			h m s	s			° ' "	"		
76 03 12.07	2849.57101	SG	B	07 53	20.453	-.043	B	+21 15	47.80	-0.50	8.476092
76 03 15.06	2852.56260	HC	B	07 53	01.034	-.017		+21 16			8.517846
76 03 17.06	2854.55701	EH	B	07 52	50.273	-.035	B	+21 17	28.66	-0.54	8.546452
76 03 18.05	2855.55423	SG	B	07 52	45.598	-.014	B	+21 17	45.40	-0.19	8.560972
76 03 19.05	2856.55145	DR	B	07 52	41.352	-.020		+21 18			8.575632
76 03 20.05	2857.54867	WD	B	07 52	37.627	+.037	B	+21 18	14.46	-0.11	8.590426
76 03 21.05	2858.54590	RR	B	07 52	34.257	-.009	B	+21 18	26.52	-0.65	8.605350
76 03 22.04	2859.54314	RR	B	07 52	31.430	+.027	B	+21 18	38.18	-0.34	8.620401
76 03 23.04	2860.54038	RB	B	07 52	28.966	-.033	B	+21 18	48.82	+0.20	8.635572
76 03 24.04	2861.53763	TR	B	07 52	27.024	-.032	B	+21 18	56.71	-0.75	8.650860
76 03 25.03	2862.53488	HD	B	07 52	25.611	+.038	B	+21 19	04.67	-0.39	8.666260
76 03 26.03	2863.53214	RB	B	07 52	24.586	+.034	B	+21 19	10.77	-0.61	8.681765
76 03 27.03	2864.52940	TC	B	07 52	24.006	+.012	B	+21 19	16.44	-0.00	8.697374
76 03 29.02	2866.52395	EH	B	07 52	24.259	-.010	B	+21 19	22.31	-0.42	8.728873
76 04 02.01	2870.51309	RR	B	07 52	30.395	-.016	B	+21 19	19.57	-0.35	8.792872
76 04 03.01	2871.51040	RB	B	07 52	33.102	-.012	B	+21 19	15.77	-0.25	8.809049
76 04 04.01	2872.50770	EH	B	07 52	36.242	-.038	B	+21 19	10.81	-0.05	8.825288
76 04 05.01	2873.50501	WD	B	07 52	39.905	-.006	B	+21 19	03.30	-1.15	8.841582
76 04 08.00	2876.49698	RM	B	07 52	53.494	-.070	B	+21 18	37.42	-0.32	8.890750
76 04 09.99	2878.49165	HC	B	07 53	04.958	+.022	B	+21 18	12.80	-0.98	8.923718
76 04 10.99	2879.48899	CS	B	07 53	11.355	+.064		+21 17			8.940244
76 04 11.99	2880.48634	RR	B	07 53	18.114	+.022	B	+21 17	44.56	-0.34	8.956792
76 04 12.98	2881.48369	DR	B	07 53	25.357	+.024	B	+21 17	27.97	-0.64	8.973359
76 04 13.98	2882.48105	RR	B	07 53	33.006	-.011	B	+21 17	10.47	-0.61	8.989940
76 04 14.98	2883.47842	RM	B	07 53	41.097	-.043	B	+21 16	51.70	-0.62	9.006530
76 04 15.98	2884.47578	TR	B	07 53	49.569	-.134	B	+21 16	31.62	-0.70	9.023126
76 10 27.50	3078.99930	TR	B	09 14	36.657	+.066	B	+16 42	22.12	-0.37	9.268123
76 10 28.50	3079.99672	CS	B	09 14	49.963	+.005		+16 41			9.251945
76 10 29.49	3080.99414	TR	B	09 15	02.905	-.028	B	+16 40	44.05	-0.48	9.235717
76 11 01.49	3083.98637	SG	B	09 15	39.480	+.006	B	+16 38	30.66	-0.24	9.186779
76 11 02.48	3084.98377	DR	B	09 15	50.877	+.024		+16 37			9.170396
76 11 06.47	3088.97333	EH	B	09 16	32.270	-.041	B	+16 35	23.68	-0.84	9.104624
76 11 08.47	3090.96808	CS	B	09 16	50.592	+.014	B	+16 34	22.36	-0.63	9.071656
76 11 11.46	3093.96017	CS	B	09 17	14.849	+.007	B	+16 33	04.74	-0.39	9.022199
76 11 13.45	3095.95487	EH	B	09 17	28.885	-.005	B	+16 32	22.32	-0.71	8.989276
76 11 14.45	3096.95221	EJ	B	09 17	35.263	-.003	B	+16 32	04.43	-0.54	8.972844
76 11 17.44	3099.94421	EJ	B	09 17	51.725	-.047	B	+16 31	22.65	-0.21	8.923718
76 11 19.44	3101.93885	EH	B	09 18	00.557	-.019	B	+16 31	04.75	-0.13	8.891162
76 11 21.43	3103.93347	EJ	B	09 18	07.613	-.000	B	+16 30	54.41	-0.58	8.858810
76 11 22.43	3104.93077	SG	B	09 18	10.498	+.029	B	+16 30	51.81	-1.30	8.842724
76 11 23.43	3105.92807	DR	B	09 18	12.870	-.009	B	+16 30	52.82	-0.47	8.826706
76 11 24.43	3106.92536	TR	B	09 18	14.865	+.023	B	+16 30	54.75	-0.78	8.810761
76 11 30.41	3112.90901	EH	B	09 18	17.151	-.043	B	+16 31	52.08	-0.23	8.716916
76 12 01.41	3113.90626	EJ	B	09 18	16.022	-.002		+16 32			8.701627
76 12 03.40	3115.90076	DR	B	09 18	12.328	-.030	B	+16 32	47.91	-0.16	8.671392
76 12 06.39	3118.89247	SG	B	09 18	03.580	+.010	B	+16 34	01.06	-0.78	8.626973
76 12 10.38	3122.88134	EJ	B	09 17	45.775	+.015	B	+16 36	07.61	-0.27	8.569690
76 12 13.37	3125.87294	TR	B	09 17	27.855	-.013	B	+16 38	03.07	+0.24	8.528350
77 01 05.31	3148.80720	EJ	B	09 13	12.718	-.004	B	+17 01	14.38	-0.22	8.271971
77 01 06.30	3149.80429	RB	B	09 12	57.456	-.057	B	+17 02	32.66	+0.56	8.263715
77 01 11.29	3154.78971	TC	B	09 11	37.290	-.034	B	+17 09	15.23	-0.11	8.226542

24 SIX-INCH TRANSIT CIRCLE OBSERVATIONS OF THE SUN, MOON, AND PLANETS

SATURN

Date	J.E.D.	O	L	Obs.	R.A.	(O-C)	L	Obs.	Decl.	(O-C)	Distance
244		h m s			s	° ' "			"		
77 01 12.29	3155.78679	CS	B	09 11	20.472	-.044	B	+17 10	38.56	-0.25	8.219952
77 01 26.25	3169.74562	EJ	B	09 07	05.121	+.014	B	+17 31	11.10	-0.47	8.159052
77 01 30.23	3173.73380	EJ	B	09 05	47.664	-.021	B	+17 37	12.57	-1.37	8.152795
77 01 31.23	3174.73084	SG	B	09 05	28.171	-.030	B	+17 38	43.87	-0.56	8.152018
77 02 01.23	3175.72789	CS	B	09 05	08.639	-.049	B	+17 40	13.87	-0.90	8.151554
77 02 03.22	3177.72198	EH	B	09 04	29.549	-.061	B	+17 43	14.86	-0.05	8.151571
77 02 06.21	3180.71311	EH	B	09 03	31.026	+.008	B	+17 47	42.82	-0.14	8.153951
77 02 08.21	3182.70720	EH	B	09 02	52.061	-.040	B	+17 50	39.59	-0.06	8.157103
77 02 09.20	3183.70425	SG	B	09 02	32.677	-.042	B	+17 52	06.84	-0.38	8.159147
77 02 10.20	3184.70129	RR	B	09 02	13.412	+.006	B	+17 53	34.16	-0.08	8.161503
77 02 11.20	3185.69834	TC	B	09 01	54.217	+.045	B	+17 54	59.96	-0.67	8.164170
77 03 09.12	3211.62229	TR	B	08 54	35.945	-.011	B	+18 26	40.44	-0.93	8.336690
77 03 10.12	3212.61941	RB	B	08 54	22.629	-.026	B	+18 27	36.50	-0.46	8.346941
77 03 11.12	3213.61653	RR	B	08 54	09.685	-.008	B	+18 28	30.38	-0.61	8.357430
77 03 14.11	3216.60791	SG	B	08 53	32.875	-.018	B	+18 31	03.78	+0.09	8.390284
77 03 16.10	3218.60219	RR	B	08 53	10.099	-.052	B	+18 32	36.63	-0.90	8.413306
77 03 17.10	3219.59933	RB	B	08 52	59.335	-.000	B	+18 33	21.73	-0.25	8.425139
77 03 24.08	3226.57947	TR	B	08 51	54.534	+.008	B	+18 37	44.83	-0.65	8.513595
77 03 25.08	3227.57665	DR	B	08 51	46.877	-.012	B	+18 38	15.64	-0.53	8.526977
77 03 26.07	3228.57384	EH	B	08 51	39.654	-.014	B	+18 38	44.63	-0.46	8.540531
77 03 27.07	3229.57103	TC	B	08 51	32.834	-.031	B	+18 39	12.05	-0.20	8.554252
77 03 31.06	3233.55984	TR	B	08 51	09.896	+.005	B	+18 40			8.610707
77 04 01.06	3234.55706	TR	B	08 51	05.215	+.004	B	+18 41	00.96	-0.67	8.625189
77 04 02.05	3235.55428	EH	B	08 51	00.923	-.037	B	+18 41	18.30	+0.10	8.639809
77 04 07.04	3240.54046	RB	B	08 50	46.193	-.004	B	+18 42	13.31	-0.79	8.714821
77 04 08.04	3241.53771	RR	B	08 50	44.549	-.008	B	+18 42	19.66	-0.23	8.730175
77 04 09.03	3242.53496	TC	B	08 50	43.396	+.040	B	+18 42	23.26	-0.63	8.745635
77 04 11.03	3244.52949	SG	B	08 50	42.232	-.036	B	+18 42	26.22	-0.37	8.776860
77 04 12.03	3245.52676	EH	B	08 50	42.438	+.058	B	+18 42	24.98	-0.30	8.792614
77 04 13.02	3246.52404	TR	B	08 50	42.966	+.038	B	+18 42	21.31	-0.87	8.808457
77 04 14.02	3247.52132	RB	B	08 50	43.928	+.012	B	+18 42	17.29	-0.02	8.824383
77 04 22.00	3255.49975	RB	B	08 51	07.628	-.011	B	+18 40	33.90	-0.06	8.954211
77 04 30.98	3264.47586	RB	B	08 52	07.357	-.010	B	+18 36	25.06	+0.56	9.103145

URANUS

75 05 06.17	2538.67112	RR	C	13 51	44.589	-.045		-10 53			17.500581
75 05 09.16	2541.66261	KR	C	13 51	16.924	-.022	C	-10 50	36.15	-0.30	17.514716
75 05 11.16	2543.65694	RR	C	13 50	58.820	-.032	C	-10 48	57.93	-0.08	17.525564
75 05 12.15	2544.65410	RR	C	13 50	49.855	-.072	C	-10 48	09.82	-0.26	17.531412
75 05 17.14	2549.63995	KR	C	13 50	06.596	-.061	C	-10 44	16.08	-0.21	17.564738
75 05 20.13	2552.63147	CS	C	13 49	41.847	-.030	C	-10 42	02.74	-0.36	17.587928
75 05 21.13	2553.62865	RR	C	13 49	33.796	-.040	C	-10 41	19.12	-0.02	17.596168
75 05 22.13	2554.62583	CS	C	13 49	25.863	-.049	C	-10 40	36.52	-0.05	17.604666
75 05 24.12	2556.62019	TC	C	13 49	10.382	-.046	C	-10 39	13.72	-0.45	17.622407
75 05 29.11	2561.60612	RR	C	13 48	33.921	-.038	C	-10 35	58.44	-0.38	17.670964
75 06 03.09	2566.59208	RM	C	13 48	00.860	-.032	C	-10 33	01.95	+0.32	17.725242
75 06 18.05	2581.55026	RR	C	13 46	45.505	-.069		-10 26			17.918143
75 06 22.04	2585.53918	CS	C	13 46	32.126	-.036	C	-10 25	23.68	-0.06	17.975939
75 06 23.04	2586.53642	RR	C	13 46	29.210	-.065		-10 25			17.990733
76 01 15.49	2792.99346	RR	C	14 18	36.000	-.045	C	-13 19	37.91	-0.15	18.692537
76 01 22.47	2799.97474	EJ	C	14 19	10.582	-.003	C	-13 22	24.74	-1.00	18.574539
76 01 23.47	2800.97206	SG	C	14 19	14.673	-.017	C	-13 22	43.09	+0.09	18.557524
76 01 24.47	2801.96937	CS	C	14 19	18.553	-.034	C	-13 23	02.32	-0.77	18.540491
76 02 07.43	2815.93152	HD	C	14 19	50.592	-.035		-13 25			18.302445

URANUS

Date	J.E.D.	O	L	Obs.	R.A.	(O-C)	L	Obs.	Decl.	(O-C)	Distance
	244			h m s	s				"	"	
76 02 09.43	2817.92607	DR	C	14 19	51.724	-.021	C	-13 25	28.67	-0.25	18.268995
76 02 10.42	2818.92334	SG	C	14 19	51.951	-.033	C	-13 25	28.10	+0.28	18.252376
76 02 16.41	2824.90692	SG	C	14 19	48.889	-.042	C	-13 25	06.58	-0.78	18.154306
76 02 17.40	2825.90418	RM	C	14 19	47.661	-.014	C	-13 24	58.87	-0.58	18.138287
76 02 19.40	2827.89868	SG	C	14 19	44.471	-.064	C	-13 24	40.32	-0.22	18.106566
76 02 21.39	2829.89317	EJ		14 19			C	-13 24	16.66	+1.10	18.075294
76 02 23.39	2831.88766	HC	C	14 19	35.750	-.043		-13 23			18.044531
76 02 27.38	2835.87660	HC	C	14 19	23.788	-.003	C	-13 22	47.47	-0.95	17.984639
76 02 28.37	2836.87383	EH	C	14 19	20.285	-.001	C	-13 22	27.80	-0.00	17.970047
76 03 07.35	2844.85158	EJ	C	14 18	45.315	-.002	C	-13 19	23.65	-0.25	17.859391
76 03 12.34	2849.83761	EJ	C	14 18	17.556	-.064	C	-13 16	59.16	-0.13	17.796441
76 03 15.33	2852.82920	SG	C	14 17	58.939	-.048	C	-13 15	22.96	-0.59	17.761208
76 03 17.32	2854.82359	HD	C	14 17	45.697	-.074		-13 14			17.738842
76 03 20.32	2857.81516	CS	C	14 17	24.798	-.040	C	-13 12	25.69	-0.08	17.707016
76 03 22.31	2859.80953	TR	C	14 17	10.096	-.080	C	-13 11	09.72	+0.16	17.686998
76 03 24.30	2861.80389	SG	C	14 16	54.934	-.033	C	-13 09	51.35	+0.10	17.667975
76 03 26.30	2863.79825	EJ	C	14 16	39.212	-.017	C	-13 08	30.78	-0.37	17.649962
76 03 29.29	2866.78977	HC	C	14 16	14.680	-.019	C	-13 06	24.33	-0.16	17.624907
76 04 03.28	2871.77562	SG	C	14 15	31.582	-.064	C	-13 02	43.10	-0.33	17.588551
76 04 05.27	2873.76996	DR	C	14 15	13.737	-.031	C	-13 01	11.03	-0.12	17.575963
76 04 06.27	2874.76712	RM	C	14 15	04.683	-.022	C	-13 00	25.02	-0.67	17.570095
76 04 10.26	2878.75577	EH	C	14 14	27.681	-.018	C	-12 57	14.52	-0.12	17.549476
76 04 13.25	2881.74725	TR	C	14 13	59.210	-.049	C	-12 54	48.72	-0.29	17.537053
76 04 14.24	2882.74441	EH	C	14 13	49.609	-.064	C	-12 53	58.75	+0.45	17.533496
76 04 16.24	2884.73873	HC	C	14 13	30.373	-.004	C	-12 52	20.35	-0.23	17.527266
76 04 17.24	2885.73589	EH	C	14 13	20.640	-.033	C	-12 51	30.56	-0.27	17.524595
76 04 18.23	2886.73304	WD	C	14 13	10.925	-.012	C	-12 50	40.87	-0.55	17.522221
76 04 19.23	2887.73020	HC	C	14 13	01.166	-.003	C	-12 49	50.66	-0.46	17.520135
76 04 20.23	2888.72736	TR	C	14 12	51.345	-.028	C	-12 48	59.72	+0.24	17.518351
76 04 22.22	2890.72167	EJ	C	14 12	31.707	-.006	C	-12 47	19.44	-0.30	17.515683
76 04 24.22	2892.71598	CS	C	14 12	11.963	-.024	C	-12 45	38.15	-0.15	17.514208
76 05 09.17	2907.67334	RR	C	14 09	45.760	-.077	C	-12 33	09.64	-0.52	17.541262
76 05 13.16	2911.66199	HD	C	14 09	08.456	-.054	C	-12 29	58.38	-0.30	17.559571
76 05 17.15	2915.65065	TC	C	14 08	32.337	-.049	C	-12 26	53.42	-0.01	17.582351
76 05 21.14	2919.63932	EJ	C	14 07	57.593	-.038	C	-12 23	57.26	-1.11	17.609491
76 05 22.14	2920.63650	EH	C	14 07	49.155	-.025	C	-12 23	13.19	-0.08	17.616946
76 05 23.13	2921.63367	RB	C	14 07	40.788	-.046	C	-12 22	30.58	+0.03	17.624659
76 05 25.13	2923.62802	TR	C	14 07	24.432	-.040	C	-12 21	07.37	-0.02	17.640861
76 05 28.12	2926.61956	TR	C	14 07	00.780	-.032	C	-12 19	07.66	-0.52	17.667081
76 05 31.11	2929.61110	TC	C	14 06	38.237	-.057		-12 17			17.695524
76 06 04.10	2933.59986	TR	C	14 06	10.136	-.027	C	-12 14	51.07	+0.03	17.736726
76 06 05.10	2934.59705	WD	C	14 06	03.472	-.012	C	-12 14	18.73	-1.24	17.747598
76 06 06.09	2935.59424	EJ	C	14 05	56.925	-.027	C	-12 13	44.64	+0.04	17.758687
76 06 07.09	2936.59144	SG	C	14 05	50.571	-.001	C	-12 13	11.98	+0.67	17.769985
76 06 08.09	2937.58864	EH	C	14 05	44.287	-.060	C	-12 12	41.68	-0.25	17.781492
76 06 09.09	2938.58584	BK	C	14 05	38.263	-.016	C	-12 12	11.58	-0.52	17.793209
76 06 10.08	2939.58304	HC	C	14 05	32.352	-.019	C	-12 11	41.60	-0.07	17.805129
76 06 11.08	2940.58024	RM	C	14 05	26.567	-.059	C	-12 11	13.10	-0.21	17.817249
76 06 27.04	2956.53576	RB	C	14 04	17.871	-.016	C	-12 05	39.52	-0.24	18.035346
76 06 28.03	2957.53300	RR	C	14 04	15.103	-.038	C	-12 05	27.37	-0.62	18.050289
77 01 26.47	3169.97430	EJ	C	14 37	17.411	-.037	C	-14 53	41.29	-0.88	18.621197
77 01 30.46	3173.96355	EJ	C	14 37	32.581	-.005	C	-14 54	47.58	-0.39	18.553108
77 01 31.46	3174.96086	SG	C	14 37	35.828	-.011	C	-14 55	02.33	-0.94	18.536064
77 02 01.46	3175.95816	CS	C	14 37	38.828	-.049	C	-14 55	15.51	-0.94	18.519020
77 02 02.46	3176.95547	EJ	C	14 37	41.677	-.022	C	-14 55	27.71	-0.95	18.501975

26 SIX-INCH TRANSIT CIRCLE OBSERVATIONS OF THE SUN, MOON, AND PLANETS

URANUS

Date	J.E.D.	O	L	Obs.	R.A.	(O-C)	L	Obs.	Decl.	(O-C)	Distance
	244			h m s	s			° ' "	"		
77 02 10.43	3184.93379	RR	C	14 37	56.436	-.004	C	-14 56	26.91	+0.49	18.366404
77 03 09.36	3211.85948	SG	C	14 37	05.188	-.045	C	-14 52	01.86	+0.35	17.947749
77 03 10.36	3212.85670	CS	C	14 37	00.509	-.015	C	-14 51	39.32	-0.03	17.934225
77 03 11.35	3213.85391	EH	C	14 36	55.659	+0.027	C	-14 51	15.91	-0.36	17.920886
77 03 15.34	3217.84274	TR	C	14 36	34.208	-.057	C	-14 49	32.71	-0.44	17.869442
77 03 17.34	3219.83714	TC	C	14 36	22.481	-.038	C	-14 48	36.18	-0.45	17.844937
77 03 29.30	3231.80341	EH		14 34			C	-14 41	55.16	-0.88	17.716955
77 04 02.29	3235.79212	CS	C	14 34	26.435	-.054	C	-14 39	20.34	-0.48	17.682176
77 04 07.28	3240.77797	SG	C	14 33	43.540	-.029	C	-14 35	55.22	-0.56	17.644647
77 04 10.27	3243.76947	CS	C	14 33	16.618	-.039	C	-14 33	46.16	-0.08	17.625411
77 04 11.27	3244.76663	DR	C	14 33	07.496	-.014	C	-14 33	03.26	-0.86	17.619564
77 04 12.26	3245.76380	RR	C	14 32	58.251	-.027	C	-14 32	19.49	-1.17	17.613993
77 04 14.26	3247.75812	EJ	C	14 32	39.543	-.036	C	-14 30	49.71	-0.66	17.603714
77 04 15.26	3248.75528	SG	C	14 32	30.079	-.044	C	-14 30	04.04	-0.16	17.599003
77 04 22.24	3255.73539	EH	C	14 31	22.351	-.032	C	-14 24	41.25	-1.04	17.574271
77 04 27.22	3260.72116	SG	C	14 30	32.889	-.037	C	-14 20	44.20	-0.33	17.565510
77 04 28.22	3261.71832	EJ	C	14 30	22.936	-.042	C	-14 19	56.81	-0.49	17.564660
77 05 02.21	3265.70694	DR	C	14 29	43.097	-.050	C	-14 16	45.72	+0.12	17.564213
77 05 06.20	3269.69556	EJ	C	14 29	03.462	-.027	C	-14 13	36.42	-0.35	17.568522
77 05 10.18	3273.68418	DR	C	14 28	24.191	-.035	C	-14 10	28.44	-0.11	17.577531
77 05 11.18	3274.68134	TC	C	14 28	14.448	-.047	C	-14 09	41.85	-0.04	17.580525
77 05 12.18	3275.67850	RR	C	14 28	04.769	-.038	C	-14 08	56.41	-0.92	17.583798
77 05 16.17	3279.66713	SG	C	14 27	26.561	-.027	C	-14 05	53.29	-0.54	17.599814
77 05 17.16	3280.66429	RR	C	14 27	17.146	-.044	C	-14 05	08.13	-0.32	17.604539
77 05 18.16	3281.66146	RB	C	14 27	07.835	-.030	C	-14 04	24.43	-1.19	17.609549
77 05 20.16	3283.65578	TR	C	14 26	49.379	-.064	C	-14 02	56.39	-1.19	17.620398
77 05 21.15	3284.65295	TC	C	14 26	40.308	-.046	C	-14 02	12.50	-0.71	17.626245
77 05 23.15	3286.64728	SG	C	14 26	22.407	-.030	C	-14 00	46.90	-0.65	17.638771
77 05 24.14	3287.64445	CS	C	14 26	13.589	-.025	C	-14 00	04.32	-0.16	17.645432
77 05 27.14	3290.63596	RR	C	14 25	47.711	-.021	C	-13 58	01.58	-0.83	17.667043
77 05 28.13	3291.63313	EH	C	14 25	39.278	-.034	C	-13 57	21.48	-0.86	17.674766
77 05 29.13	3292.63030	CS	C	14 25	30.977	-.027	C	-13 56	41.13	-0.10	17.682748
77 06 04.11	3298.61338	EJ	C	14 24	43.689	-.000	C	-13 52	56.19	-0.19	17.735888
77 06 05.11	3299.61056	CS	C	14 24	36.207	-.038	C	-13 52	21.03	-0.31	17.745599
77 06 08.10	3302.60212	CS	C	14 24	14.691	-.018	C	-13 50	39.04	-0.17	17.776126
77 06 11.09	3305.59369	TC	C	14 23	54.412	-.030	C	-13 49	03.60	-0.31	17.808690
77 06 12.09	3306.59089	EJ		14 23			C	-13 48	33.03	-0.12	17.819978
77 06 16.08	3310.57969	RR	C	14 23	23.734	-.009	C	-13 46	39.31	-0.04	17.867257
77 06 17.08	3311.57689	SG	C	14 23	18.070	-.018	C	-13 46	13.39	-0.48	17.879588
77 06 30.04	3324.54073	BK	C	14 22	20.355	-.040	C	-13 41	48.97	+0.35	18.056026
77 07 03.03	3327.53244	RR	C	14 22	11.431	-.064	C	-13 41	10.27	+0.41	18.100428
77 07 04.03	3328.52967	CS	C	14 22	08.861	-.041	C	-13 41	00.38	-0.68	18.115500

NEPTUNE

75 05 06.29	2538.78703	RM	C	16 39	06.628	-.439		-20 31			29.390222
75 05 07.28	2539.78423	CS	C	16 39	00.638	-.443	C	-20 31	07.82	+1.30	29.382719
75 05 08.28	2540.78143	HC	C	16 38	54.599	-.433	C	-20 30	54.69	+1.46	29.375486
75 05 09.28	2541.77863	SG	C	16 38	48.472	-.449	C	-20 30	42.15	+0.95	29.368520
75 05 17.26	2549.75620	HD	C	16 37	57.691	-.468	C	-20 28	54.48	+1.96	29.322740
75 05 20.25	2552.74778	RM	C	16 37	37.963	-.424	C	-20 28	14.23	+1.51	29.310221
75 05 21.24	2553.74497	KR	C	16 37	31.291	-.437	C	-20 28	01.01	+1.05	29.306623
75 05 28.23	2560.72532	RM	C	16 36	44.063	-.435		-20 26			29.289488
75 06 02.21	2565.71127	HC	C	16 36	09.879	-.455	C	-20 25	17.24	+1.05	29.285949
75 06 22.16	2585.65512	CS	C	16 33	56.631	-.435	C	-20 21	01.75	+1.28	29.344228

NEPTUNE

Date	J.E.D.	O	L	Obs.	R.A.	(O-C)	L	Obs.	Decl.	(O-C)	Distance
	244			h m s	s				"	"	
75 06 23.15	2586.65232	RR	C	16 33	50.347	-.437	C	-20 20	50.41	+1.05	29.350093
75 07 02.13	2595.62712	TC	C	16 32	56.313	-.493	C	-20 19	13.35	+1.23	29.414761
75 07 08.11	2601.61036	TR	C	16 32	23.582	-.403	C	-20 18	16.77	+1.30	29.469274
75 07 20.08	2613.57695	TC	C	16 31	27.499	-.413	C	-20 16	48.39	+0.76	29.602975
75 07 22.07	2615.57140	RR	C	16 31	19.466	-.516	C	-20 16	37.27	+0.52	29.628123
75 07 23.07	2616.56862	HD	C	16 31	15.715	-.463	C	-20 16	31.16	+1.35	29.640981
75 07 27.06	2620.55754	RR	C	16 31	01.604	-.439	C	-20 16	12.99	+1.02	29.694198
75 07 28.05	2621.55477	WD	C	16 30	58.323	-.465	C	-20 16	08.85	+1.18	29.707938
75 07 30.05	2623.54924	CS	C	16 30	52.222	-.410	C	-20 16	01.86	+1.00	29.735898
75 07 31.05	2624.54647	SG	C	16 30	49.309	-.423	C	-20 15	58.42	+1.27	29.750106
75 08 09.02	2633.52166	RB	C	16 30	28.800	-.424	C	-20 15	42.72	+1.71	29.884437
76 02 29.48	2837.97610	CS	C	16 50	56.749	-.427	C	-20 57	24.94	+1.17	30.346333
76 03 07.46	2844.95712	EJ	C	16 51	08.855	-.411	C	-20 57	25.94	+0.60	30.225951
76 03 12.44	2849.94352	EJ	C	16 51	13.180	-.468	C	-20 57	19.09	+0.69	30.140373
76 03 17.43	2854.92988	HD	C	16 51	13.948	-.491	C	-20 57	05.78	+1.44	30.055861
76 03 18.43	2855.92715	HC	C	16 51	13.701	-.474	C	-20 57	02.47	+1.50	30.039131
76 03 20.42	2857.92168	CS	C	16 51	12.776	-.460	C	-20 56	55.59	+1.22	30.005888
76 03 24.41	2861.91071	SG	C	16 51	09.241	-.459	C	-20 56	38.96	+1.08	29.940416
76 03 26.41	2863.90522	EJ	C	16 51	06.622	-.470	C	-20 56	29.15	+1.26	29.908253
76 04 03.38	2871.88320	SG	C	16 50	50.799	-.438	C	-20 55	41.89	+1.44	29.784390
76 04 05.38	2873.87767	DR	C	16 50	45.541	-.439		-20 55			29.754819
76 04 06.37	2874.87491	RM	C	16 50	42.730	-.435	C	-20 55	21.92	+0.53	29.740264
76 04 09.37	2877.86661	EJ	C	16 50	33.509	-.463	C	-20 54	58.52	+1.50	29.697590
76 04 10.36	2878.86385	EH	C	16 50	30.208	-.457	C	-20 54	50.86	+1.34	29.683708
76 04 13.36	2881.85553	TR	C	16 50	19.557	-.462	C	-20 54	26.15	+1.46	29.643144
76 04 14.35	2882.85276	EH	C	16 50	15.801	-.441	C	-20 54	17.83	+1.21	29.629990
76 04 15.35	2883.84998	CS	C	16 50	11.872	-.484	C	-20 54	09.62	+0.69	29.617034
76 04 16.35	2884.84721	HC	C	16 50	07.888	-.474	C	-20 54	01.31	+0.10	29.604268
76 04 17.34	2885.84443	EH	C	16 50	03.776	-.486	C	-20 53	51.80	+0.58	29.591702
76 04 18.34	2886.84165	WD	C	16 49	59.628	-.428	C	-20 53	42.21	+1.01	29.579338
76 04 20.34	2888.83609	TR	C	16 49	50.885	-.439	C	-20 53	23.54	+0.95	29.555226
76 04 22.33	2890.83052	EJ	C	16 49	41.700	-.471	C	-20 53	04.34	+0.87	29.531978
76 04 23.33	2891.82774	HC	C	16 49	36.991	-.449	C	-20 52	54.72	+0.65	29.520681
76 04 24.32	2892.82495	CS	C	16 49	32.173	-.436	C	-20 52	44.64	+0.75	29.509606
76 05 09.28	2907.78304	RR	C	16 48	09.412	-.462		-20 50			29.372603
76 05 13.27	2911.77183	EJ	C	16 47	44.610	-.503	C	-20 49	13.83	+0.89	29.345919
76 05 15.27	2913.76622	WD	C	16 47	31.955	-.468	C	-20 48	49.55	+1.31	29.334221
76 05 20.25	2918.75220	TR	C	16 46	59.394	-.490	C	-20 47	49.59	+1.11	29.309824
76 05 22.25	2920.74658	RR	C	16 46	46.092	-.486	C	-20 47	25.53	+0.88	29.302040
76 05 25.24	2923.73816	HC	C	16 46	25.884	-.500	C	-20 46	48.59	+1.16	29.292527
76 05 28.23	2926.72973	TR	C	16 46	05.541	-.445	C	-20 46	12.37	+0.66	29.285624
76 06 06.20	2935.70444	EJ	C	16 45	03.843	-.408	C	-20 44	22.48	+1.84	29.280732
76 06 10.19	2939.69321	RR	C	16 44	36.434	-.467	C	-20 43	35.84	+1.15	29.286138
76 06 27.15	2956.64551	RB	C	16 42	45.309	-.441	C	-20 40	31.51	+0.89	29.359772
76 06 28.14	2957.64270	RR	C	16 42	39.182	-.448	C	-20 40	21.18	+1.47	29.366581
76 07 14.10	2973.59800	TR	C	16 41	11.026	-.438	C	-20 38	08.79	+1.02	29.509743
76 07 19.08	2978.58408	DR	C	16 40	47.975	-.439	C	-20 37	36.26	+2.29	29.566572
76 07 20.08	2979.58130	EH	C	16 40	43.700	-.404	C	-20 37	31.97	+0.98	29.578566
76 07 26.06	2985.56465	CS	C	16 40	20.078	-.427	C	-20 37	02.19	+2.08	29.654628
76 08 02.05	2992.54527	TC	C	16 39	57.639	-.456	C	-20 36	40.68	+1.31	29.751443
76 08 04.04	2994.53975	BK	C	16 39	52.324	-.456	C	-20 36	36.99	+0.84	29.780505

NEPTUNE

Date	J.E.D.	O	L	Obs.	R.A.	(O-C)	L	Obs.	Decl.	(O-C)	Distance
244				h	m	s		°	'	"	
76 08 11.02	3001.52047	RR	C	16	39	37.702	-.433	C	-20	36 30.02	+1.85 29.886399
77 03 10.46	3212.95601	CS	C	17	00	24.258	-.489	C	-21	13 49.65	+1.09 30.210754
77 03 11.45	3213.95329	EH	C	17	00	25.342	-.493	C	-21	13 48.09	+1.46 30.193609
77 03 15.44	3217.94240	TR	C	17	00	28.297	-.462	C	-21	13 41.69	+1.24 30.125311
77 03 17.44	3219.93695	TC	C	17	00	28.894	-.453	C	-21	13 37.59	+0.85 30.091397
77 03 24.42	3226.91781	EJ	C	17	00	26.394	-.502	C	-21	13 15.20	+1.02 29.974669
77 03 25.42	3227.91507	SG	C	17	00	25.493	-.494	C	-21	13 10.62	+1.66 29.958316
77 03 29.40	3231.90409	EH	C	17	00	20.473	-.508	C	-21	12 54.25	+0.50 29.893892
77 04 07.38	3240.87929	SG	C	17	00	01.390	-.463	C	-21	12 03.06	+1.87 29.756039
77 04 08.38	3241.87653	EH	C	16	59	58.631	-.460	C	-21	11 57.27	+1.28 29.741422
77 04 10.37	3243.87100	CS	C	16	59	52.741	-.453	C	-21	11 44.60	+0.79 29.712671
77 04 11.37	3244.86824	DR	C	16	59	49.537	-.520	C	-21	11 37.08	+1.51 29.698539
77 04 12.37	3245.86547	RR	C	16	59	46.347	-.449	C	-21	11 30.94	+0.70 29.684572
77 04 14.36	3247.85993	EJ	C	16	59	39.391	-.515	C	-21	11 17.01	+0.28 29.657180
77 04 15.36	3248.85716	SG	C	16	59	35.777	-.503	C	-21	11 08.75	+1.13 29.643750
77 04 27.32	3260.82379	SG	C	16	58	43.791	-.470	C	-21	09 29.69	+0.78 29.498327
77 04 28.32	3261.82100	EJ	C	16	58	38.797	-.469	C	-21	09 20.80	+0.65 29.487632
77 05 06.30	3269.79866	EH	C	16	57	55.742	-.451	C	-21	08 04.32	+1.10 29.410632
77 05 10.29	3273.78747	TR	C	16	57	32.325	-.473	C	-21	07 24.27	+1.31 29.378127
77 05 11.28	3274.78467	EJ	C	16	57	26.280	-.488	C	-21	07 14.45	+1.00 29.370652
77 05 12.28	3275.78187	EH	C	16	57	20.197	-.474	C	-21	07 04.19	+1.05 29.363441
77 05 16.27	3279.77066	DR	C	16	56	55.187	-.497	C	-21	06 22.25	+1.49 29.337315
77 05 17.27	3280.76786	RR	C	16	56	48.802	-.500	C	-21	06 11.67	+1.57 29.331466
77 05 18.27	3281.76505	EH	C	16	56	42.415	-.456	C	-21	06 01.27	+1.41 29.325896
77 05 23.25	3286.75102	SG	C	16	56	09.620	-.452	C	-21	05 08.38	+1.27 29.302281
77 05 24.25	3287.74821	CS	C	16	56	02.927	-.469	C	-21	04 58.53	+0.46 29.298414
77 05 27.24	3290.73979	SG	C	16	55	42.703	-.474	C	-21	04 26.14	+0.79 29.288542
77 05 28.24	3291.73698	EH	C	16	55	35.884	-.498	C	-21	04 14.91	+1.31 29.285821
77 05 29.23	3292.73417	CS	C	16	55	29.078	-.490	C	-21	04 04.24	+1.25 29.283397
77 06 04.22	3298.71731	EJ	C	16	54	47.934	-.490	C	-21	03 00.51	+0.94 29.274915
77 06 05.21	3299.71450	CS	C	16	54	41.066	-.472	C	-21	02 50.28	+0.63 29.274519
77 06 08.21	3302.70607	CS	C	16	54	20.392	-.467	C	-21	02 18.62	+0.88 29.275062
77 06 12.19	3306.69483	EJ	C	16	53	52.858	+.503	C	-21	01 37.63	+0.48 29.279874
77 06 30.14	3324.64432	RR	C	16	51	54.796	-.485	C	-20	58 46.46	+1.68 29.358033
77 07 03.14	3327.63592	RR	C	16	51	36.653	-.500	C	-20	58 22.70	+0.83 29.379643

CERES

75 09 17.43	2672.92800	TC		04	50	58.783	+.003	+16	42	19.90	+0.35 2.429469
75 09 27.40	2682.90419	EJ		04	56	01.083	-.012	+16	56	14.95	-0.23 2.293183
75 09 28.40	2683.90172	SG		04	56	24.108	-.015	+16	57	32.10	+0.36 2.279856
75 09 29.40	2684.89924	RR		04	56	45.769	+.012	+16	58	47.20	-0.08 2.266598
75 09 30.40	2685.89675	RM		04	57	05.977	+.001	+17	00	01.19	-0.67 2.253411
75 10 01.39	2686.89423	SG		04	57	24.766	+.007	+17	01	15.47	-0.04 2.240301
75 10 04.39	2689.88659	HD		04	58	12.321	+.016	+17	04	51.35	-0.14 2.201462
75 10 07.38	2692.87879	RM		04	58	46.313	+.004	+17	08	20.42	-0.77 2.163453
75 10 08.38	2693.87616	RM		04	58	54.558	-.015	+17	09	29.65	-0.37 2.150988
75 10 12.37	2697.86543	WD		04	59	11.912	-.017	+17	14	01.09	-0.45 2.102261
75 10 13.36	2698.86271	EJ		04	59	12.294	+.005	+17	15	08.77	+0.04 2.090382
75 10 15.36	2700.85720	RM		04	59	08.173	+.011	+17	17	22.33	-0.21 2.067018
75 10 16.35	2701.85442	HC		04	59	03.664	+.003	+17	18	29.29	+0.02 2.055540
75 10 21.34	2706.84022	RM		04	58	16.488	-.044	+17	24	02.48	-0.12 2.000351
75 10 22.34	2707.83733	TR		04	58	02.128	-.023	+17	25	10.31	+0.81 1.989783

CERES

Date	J.E.D.	O L	Obs.	R.A.	(O-C)	L Obs.	Decl.	(O-C)	Distance
	244		h m s	s		° ' "	"	"	
75 10 23.33	2708.83441	HC	04 57 46.119	+0.008	+17 26 16.94	+0.37			1.979381
75 10 29.32	2714.81651	TC	04 55 35.014	-0.012	+17 33 04.04	-0.03			1.920712
75 10 31.31	2716.81040	EJ	04 54 38.127	-0.035	+17 35 22.47	+0.13			1.902692
75 11 01.31	2717.80731	WD	04 54 07.228	-0.081	+17 36 31.51	-0.51			1.893993
75 11 02.30	2718.80421	EH	04 53 34.839	-0.028	+17 37 41.92	-0.14			1.885506
75 11 03.30	2719.80108	SG	04 53 00.791	-0.067	+17 38 51.97	-0.54			1.877237
75 11 04.30	2720.79794	RM	04 52 25.229	-0.080	+17 40 03.54	+0.15			1.869190
75 11 09.28	2725.78198	SG	04 49 05.355	-0.080	+17 46 04.76	-0.15			1.832439
75 11 11.28	2727.77549	RM	04 47 35.722	-0.055	+17 48 32.45	-0.46			1.819437
75 11 12.27	2728.77222	SG	04 46 48.951	-0.069	+17 49 47.21	-0.44			1.813314
75 11 17.26	2733.75566	RR	04 42 37.715	-0.025	+17 56 09.12	+0.21			1.786600
75 11 18.25	2734.75232	RM	04 41 44.271	-0.054	+17 57 27.03	+0.28			1.782058
75 11 19.25	2735.74896	CS	04 40 49.918	-0.058	+17 58 45.04	-0.11			1.777789
75 11 20.25	2736.74559	EJ	04 39 54.687	-0.062	+18 00 03.99	-0.13			1.773796
75 11 22.24	2738.73883	TR	04 38 01.820	-0.056	+18 02 43.44	-0.42			1.766645
75 11 23.24	2739.73543	SG	04 37 04.314	-0.033	+18 04 04.16	-0.50			1.763493
75 11 26.23	2742.72521	RR	04 34 08.026	-0.078	+18 08 11.30	+0.38			1.755747
75 11 29.21	2745.71493	EH	04 31 07.722	-0.047	+18 12 23.06	-0.38			1.750610
75 12 03.20	2749.70120	CS	04 27 04.225	-0.062	+18 18 11.39	-0.39			1.747874
75 12 05.19	2751.69434	TR	04 25 02.518	-0.060	+18 21 11.63	-0.25			1.748277
75 12 11.17	2757.67382	CS	04 19 04.548	-0.051	+18 30				1.756502
75 12 12.17	2758.67042	TC	04 18 06.618	-0.100	+18 32 20.88	-0.19			1.758879
75 12 17.15	2763.65356	SG	04 13 28.801	-0.085	+18 41 04.89	-0.11			1.774951
75 12 19.15	2765.64690	RB	04 11 44.191	-0.050	+18 44 46.58	-1.11			1.783281
75 12 23.13	2769.63371	RM	04 08 28.294	-0.048	+18 52 38.17	-0.43			1.803075
75 12 24.13	2770.63045	TC	04 07 42.406	-0.021	+18 54 41.93	-0.07			1.808658
76 01 02.10	2779.60185	TC	04 01 53.144	-0.012	+19 15 09.16	+0.24			1.869568
76 01 05.09	2782.59264	DR	04 00 24.848	-0.066	+19 22 49.33	+0.40			1.893811
76 01 10.08	2787.57768	CS	03 58 31.689	-0.013	+19 36				1.938056
76 01 15.06	2792.56322	TR	03 57 21.872	-0.017	+19 51 41.42	+0.04			1.986564
76 01 18.05	2795.55479	TR	03 57 00.888	-0.016	+20 01 21.67	+0.17			2.017470
76 01 20.05	2797.54926	DR	03 56 55.547	-0.003	+20 08 03.53	+0.23			2.038751
76 01 22.04	2799.54382	TR	03 56 57.030	-0.023	+20 14 57.01	+0.22			2.060535
76 01 23.04	2800.54113	WD	03 57 00.350	-0.015	+20 18 28.13	+0.28			2.071606
76 01 24.04	2801.53846	EH	03 57 05.343	-0.037	+20 22 02.47	+0.73			2.082790
76 01 25.04	2802.53580	HC	03 57 12.041	-0.046	+20 25 38.77	+0.34			2.094083
76 01 29.03	2806.52538	RM	03 57 55.662	-0.011	+20 40 32.26	-0.15			2.140270
76 02 05.01	2813.50787	TR	04 00 14.632	-0.026	+21 08 12.66	+0.07			2.224331
76 02 07.00	2815.50304	TC	04 01 08.496	+0.012	+21 16				2.248941
76 02 08.00	2816.50064	CS	04 01 37.674	+0.005	+21 20 36.69	+0.03			2.261325
76 02 10.00	2818.49591	RM	04 02 40.466	-0.027	+21 29 02.46	+0.35			2.286232
76 02 12.99	2821.48893	TR	04 04 25.581	-0.000	+21 41				2.323890
76 02 14.98	2823.48436	WD	04 05 42.646	+0.006	+21 50 34.20	+0.32			2.349156
76 02 20.97	2829.47101	WD	04 10 05.829	-0.037	+22 17 03.78	-0.27			2.425479
76 02 25.96	2834.46030	TR	04 14 20.183	-0.008	+22 39 29.67	-0.43			2.489372
76 12 13.50	3126.00014	TR	12 21 07.560	+0.023	+09 09 43.66	-0.39			2.524501
76 12 18.49	3130.99055	EH	12 26 59.471	+0.014	+08 52 39.38	-0.28			2.461124
76 12 24.48	3136.97874	EH	12 33 35.756	+0.012	+08 36 15.14	-0.11			2.384705
76 12 30.47	3142.96657	EH	12 39 40.572	+0.037	+08 24 37.13	+0.13			2.308380
77 01 05.45	3148.95400	EJ	12 45 10.799	+0.021	+08 18 01.44	-0.16			2.232663
77 01 06.45	3149.95186	RB	12 46 02.205	-0.016	+08 17 25.82	-0.51			2.220137
77 01 11.44	3154.94098	TC	12 50 02.957	+0.037	+08 16 45.51	-0.51			2.158056
77 01 12.44	3155.93877	CS	12 50 47.655	+0.029	+08 17 06.10	+0.47			2.145767
77 01 26.41	3169.90622	EJ	12 58 59.305	+0.000	+08 38 16.04	-0.87			1.980400
77 01 30.40	3173.89634	EJ	13 00 29.741	+0.004	+08 49 59.40	-0.76			1.936241

CERES

Date	J.E.D.	O L	Obs.	R.A.	(O-C)	L Obs.	Decl.	(O-C)	Distance
244			h m s	s		° ' "	"		
77 01 31.39	3174.89383	SG	13 00	48.604	-.026	+08 53	17.00	-1.87	1.925471
77 02 01.39	3175.89130	CS	13 01	06.001	-.007	+08 56	46.10	-0.48	1.914815
77 02 06.38	3180.87838	EH	13 02	09.675	-.018	+09 16	16.38	-0.57	1.863376
77 02 08.37	3182.87309	EH	13 02	24.079	-.015	+09 25	04.38	-0.10	1.843723
77 02 09.37	3183.87041	CS	13 02	28.850	-.029	+09 29	40.36	-0.04	1.834109
77 02 10.37	3184.86772	RR	13 02	32.033	-.003	+09 34	24.45	+0.28	1.824642
77 02 11.37	3185.86501	EJ	13 02	33.538	-.020	+09 39	15.64	+0.02	1.815326
77 03 09.29	3211.78799	SG	12 53	51.342	-.034	+12 13	46.08	+0.83	1.639024
77 03 10.28	3212.78480	CS	12 53	11.881	-.016	+12 19	57.32	-0.12	1.635206
77 03 11.28	3213.78160	EH	12 52	31.227	-.034	+12 26	06.64	+0.08	1.631634
77 03 16.27	3218.76542	EJ	12 48	52.275	-.068	+12 55	48.33	+0.09	1.617538
77 03 17.26	3219.76216	TC	12 48	05.720	-.045	+13 01	28.36	+0.12	1.615487
77 03 24.24	3226.73906	EJ	12 42	20.862	-.032	+13 37			1.608467
77 03 25.24	3227.73574	SG	12 41	29.640	-.079	+13 42	07.87	+0.08	1.608519
77 04 07.19	3240.69255	RB	12 30	22.915	+0.001	+14 23	51.43	+0.06	1.632841
77 04 09.19	3242.68596	TC	12 28	45.034	-.035	+14 27	03.77	-0.10	1.640370
77 04 12.18	3245.67613	EH	12 26	23.215	-.056	+14 30	09.58	+0.48	1.653476
77 04 14.17	3247.66962	RB	12 24	52.653	-.023	+14 31	03.10	+0.42	1.663398
77 04 15.17	3248.66639	DR	12 24	08.713	-.002	+14 31	08.77	+0.41	1.668706
77 04 27.13	3260.62853	RB	12 16	47.917	-.024	+14 14	13.42	+0.18	1.749226
77 05 01.12	3264.61639	RB	12 15	02.388	-.024	+14 01	31.94	-0.12	1.782297
77 05 02.11	3265.61340	TR	12 14	39.533	-.025	+13 57	51.51	+0.31	1.790996
77 05 06.10	3269.60159	EJ	12 13	22.543	-.019	+13 41	11.01	-0.37	1.827415
77 05 11.09	3274.58720	TC	12 12	19.055	-.015	+13 16	14.99	-0.15	1.876332
77 05 12.08	3275.58438	RR	12 12	10.722	-.040	+13 10	44.78	-0.23	1.886535
77 05 16.07	3279.57324	SG	12 11	52.175	-.014	+12 47	07.86	-0.14	1.928628
77 05 17.07	3280.57050	TR	12 11	51.209	+0.012	+12 40	50.41	-0.23	1.939453
77 05 18.07	3281.56778	RB	12 11	51.640	-.016	+12 34	23.92	-0.50	1.950392
77 05 21.06	3284.55970	TC	12 12	01.630	-.025	+12 14	14.50	-0.25	1.983856
77 05 27.04	3290.54398	RR	12 12	59.419	-.014	+11 30	24.10	-0.34	2.053368
77 05 28.04	3291.54142	EH	12 13	13.789	-.011	+11 22	40.82	-0.22	2.065249
77 05 29.04	3292.53887	CS	12 13	29.479	-.001	+11 14	50.88	-0.11	2.077204

PALLAS

75 07 23.39	2616.89209	TR	00 18	20.143	+0.048	+05 39	33.69	-0.10	2.589593
75 07 26.38	2619.88425	EH	00 18	51.125	+0.015	+05 24	05.18	+0.18	2.545007
75 07 27.38	2620.88162	SG	00 18	59.229	-.000	+05 18	31.14	+0.01	2.530347
75 07 29.38	2622.87630	RR	00 19	12.106	+0.029	+05 06	46.17	-0.04	2.501357
75 07 30.37	2623.87363	TR	00 19	16.830	+0.042	+05 00	34.10	-0.86	2.487035
75 07 31.37	2624.87094	EH	00 19	20.352	+0.008	+04 54	10.93	-0.10	2.472835
75 08 01.37	2625.86824	TC	00 19	22.751	+0.016	+04 47	34.40	+0.07	2.458763
75 08 02.37	2626.86552	WD	00 19	23.974	+0.020	+04 40	44.85	+0.09	2.444820
75 08 09.35	2633.84612	WD	00 18	59.055	+0.022	+03 46	50.89	-0.03	2.351330
75 08 10.34	2634.84329	CS	00 18	50.638	-.002	+03 38	15.58	-0.37	2.338622
75 08 18.32	2642.82017	SG	00 17	00.359	-.022	+02 21	41.18	-0.79	2.243745
75 08 25.30	2649.79924	EH	00 14	22.588	+0.008	+01 03	31.98	-0.43	2.171893
75 08 26.30	2650.79620	RR	00 13	55.572	+0.010	+00 51	33.91	-0.46	2.162574
75 08 27.29	2651.79314	HC	00 13	27.457	-.012	+00 39	24.56	-0.38	2.153506
75 08 28.29	2652.79008	RM	00 12	58.296	-.022	+00 27	03.61	-0.77	2.144692
75 08 29.29	2653.78700	CS	00 12	28.128	+0.001	+00 14	32.69	-0.28	2.136137
75 09 10.25	2665.74922	EH	00 05	13.777	+0.002	-02 27			2.055165
75 09 28.19	2683.69087	SG	23 51	56.365	-.031	-06 49	38.66	-0.88	2.015942
75 09 29.19	2684.68762	RR	23 51	11.253	+0.000	-07 03	55.42	-0.80	2.016746
75 10 01.18	2686.68112	SG	23 49	41.688	-.006	-07 32	11.42	-0.54	2.019287

PALLAS

Date	J.E.D.	O L	Obs.	R.A.	(O-C)	L Obs.	Decl.	(O-C)	Distance
	244		h m s	s		° ' "	"		
75 10 05.17	2690.66818	HC	23 46	46.920	+0.035	-08 27	19.47	-1.30	2.028041
75 10 07.16	2692.66175	TC	23 45	22.433	-0.012	-08 54	01.14	-0.57	2.034215
75 10 08.16	2693.65854	EH	23 44	41.131	-0.013	-09 07	07.90	-0.66	2.037741
75 10 12.15	2697.64579	SG	23 42	03.082	+0.025	-09 57	47.63	-0.50	2.054675
75 10 13.14	2698.64263	RR	23 41	25.520	+0.003	-10 09	58.90	-0.34	2.059596
75 10 15.14	2700.63633	TR	23 40	13.087	+0.013	-10 33	45.09	-0.25	2.070230
75 10 16.13	2701.63320	HD	23 39	38.245	+0.005	-10 45	19.71	-0.59	2.075936
75 10 22.11	2707.61465	EH	23 36	30.663	+0.007	-11 50	05.16	-0.23	2.115303
75 10 23.11	2708.61161	HD	23 36	03.225	+0.002	-12 00	05.16	-1.09	2.122675
75 10 24.11	2709.60857	CS	23 35	36.943	-0.008	-12 09	48.64	+0.30	2.130267
75 10 29.09	2714.59361	RM	23 33	43.709	-0.003	-12 54	56.12	-0.51	2.171342
75 10 31.09	2716.58773	HC	23 33	07.210	-0.004	-13 11	15.34	+0.04	2.189133
75 11 01.08	2717.58481	TR	23 32	50.913	-0.008	-13 19	03.18	-0.17	2.198300
75 11 05.07	2721.57329	CS	23 31	59.130	+0.011	-13 47	45.60	-0.34	2.236644
75 11 07.07	2723.56763	EH	23 31	41.415	+0.030	-14 00	38.24	-0.26	2.256744
75 11 12.05	2728.55374	TR	23 31	21.090	-0.011	-14 28	38.05	-0.20	2.309333
75 11 15.05	2731.54560	TC	23 31	25.423	+0.027	-14 42	37.64	+0.16	2.342274
75 11 16.04	2732.54292	WD	23 31	29.555	+0.001	-14 46	51.39	-0.80	2.353455
75 11 17.04	2733.54025	RB	23 31	35.057	-0.010	-14 50	51.44	-1.42	2.364728
75 11 18.04	2734.53760	HC	23 31	41.955	+0.026	-14 54	37.14	-0.91	2.376088
75 11 19.03	2735.53496	EH	23 31	50.154	+0.020	-14 58	10.37	-0.98	2.387531
75 11 20.03	2736.53234	SG	23 31	59.714	+0.039	-15 01	29.71	-0.09	2.399052
75 11 23.02	2739.52457	WD	23 32	36.208	-0.016	-15 10	14.62	-0.14	2.434040
75 11 25.02	2741.51947	RM	23 33	07.133	+0.027	-15 15	01.97	+0.79	2.457675
75 11 26.02	2742.51694	HD	23 33	24.483	+0.008	-15 17	08.54	+0.34	2.469574
75 11 29.01	2745.50944	RB	23 34	24.198	+0.001	-15 22			2.505540
75 12 02.00	2748.50207	EH	23 35	35.216	+0.033	-15 25			2.541824
75 12 03.00	2749.49964	HD	23 36	01.319	+0.014	-15 26	29.51	-0.01	2.553968
75 12 04.99	2751.49482	TR	23 36	57.191	+0.023	-15 27	31.45	-0.39	2.578306
75 12 05.99	2752.49243	TR	23 37	26.918	+0.038	-15 27	46.18	+0.12	2.590491
75 12 10.98	2757.48069	CS	23 40	12.694	+0.025	-15 26	34.45	+0.03	2.651412
75 12 22.95	2769.45377	RM	23 48	39.010	-0.032	-15 08	37.06	+0.06	2.795534
76 10 29.47	3080.96511	TR	08 33	08.114	+0.071	-17 20	43.69	+0.53	2.063423
76 11 01.46	3083.95963	SG	08 37	02.738	+0.056	-17 56	25.23	-0.42	2.034814
76 11 06.45	3088.95027	EH	08 43	14.389	+0.034	-18 55	21.35	-0.50	1.986964
76 11 08.45	3090.94644	CS	08 45	35.968	+0.064	-19 18	39.94	-0.25	1.967770
76 11 11.44	3093.94061	CS	08 49	00.207	+0.022	-19 53	15.62	+0.34	1.938927
76 11 13.44	3095.93665	EH	08 51	10.868	+0.074	-20 16	03.32	-0.52	1.919669
76 11 17.43	3099.92858	EJ	08 55	17.998	+0.095	-21 00	46.03	-0.17	1.881101
76 11 19.42	3101.92446	EH	08 57	14.137	+0.060	-21 22	37.43	+0.25	1.861803
76 11 21.42	3103.92028	EJ	08 59	05.184	+0.060	-21 44	05.92	+0.59	1.842507
76 11 22.42	3104.91817	SG	08 59	58.760	+0.083	-21 54	43.16	-1.71	1.832863
76 11 23.42	3105.91604	DR	09 00	50.883	-0.004	-22 05	09.09	+0.52	1.823224
76 11 24.41	3106.91390	TR	09 01	41.819	+0.081	-22 15	31.20	-0.53	1.813591
76 11 30.40	3112.90070	EH	09 06	17.274	-0.081	-23 14	46.34	+2.39	1.755988
76 12 03.39	3115.89387	DR	09 08	15.547	+0.057	-23 42	23.49	+0.82	1.727372
76 12 13.37	3125.86994	TR	09 13	07.476	+0.044	-25 01	49.87	+1.78	1.633427
76 12 24.34	3136.84134	EH	09 15	12.252	+0.097	-25 59	48.28	-0.42	1.534403
76 12 30.32	3142.82470	EH	09 14	49.620	+0.035	-26 14	09.26	+0.81	1.483501
77 01 26.24	3169.74187	EJ	09 01	40.972	+0.054	-23 47	27.85	-0.46	1.303107
77 01 30.23	3173.72889	EJ	08 58	42.197	+0.047	-22 50	54.09	+0.04	1.286204
77 01 31.23	3174.72563	SG	08 57	56.826	+0.040	-22 35	19.00	-0.31	1.282483

PALLAS

Date	J.E.D.	O L	Obs.	R.A.	(O-C)	L Obs.	Decl.	(O-C)	Distance
	244		h m s	s		° ' "	"		
77 02 01.22	3175.72238	CS	08 57	11.348	+0.038	-22 19	09.31	-0.34	1.278971
77 02 03.22	3177.71587	EH	08 55	40.328	-0.012	-21 45	07.60	+0.77	1.272586
77 02 06.21	3180.70611	EH	08 53	25.057	+0.052	-20 50	00.74	+1.14	1.264663
77 02 08.20	3182.69963	EH	08 51	56.424	-0.004	-20 10	40.01	+0.81	1.260521
77 02 10.19	3184.69317	RR	08 50	29.952	+0.055	-19 29	20.22	+0.81	1.257321
77 02 11.19	3185.68995	TC	08 49	47.629	+0.041	-19 07	58.45	+0.18	1.256081
77 03 09.11	3211.61135	TR	08 38	47.953	+0.031	-08 11	47.23	+0.60	1.313144
77 03 10.11	3212.60858	RB	08 38	44.885	+0.059	-07 45	23.52	+0.38	1.318741
77 03 11.11	3213.60584	RR	08 38	43.608	+0.032	-07 19	05.48	+0.71	1.324579
77 03 12.10	3214.60311	TC	08 38	44.217	+0.040	-06 52			1.330652
77 03 14.10	3216.59773	SG	08 38	51.015	+0.068	-06 00	59.36	+1.35	1.343497
77 03 16.09	3218.59243	RR	08 39	05.157	+0.005	-05 09	46.12	+0.27	1.357256
77 03 17.09	3219.58982	RB	08 39	15.119	+0.080	-04 44	25.65	+1.12	1.364471
77 03 24.07	3226.57210	TR	08 41	15.771	+0.047	-01 53	49.22	+0.94	1.420892
77 03 25.07	3227.56965	DR	08 41	40.225	+0.040	-01 30	31.81	+1.19	1.429751
77 03 26.07	3228.56722	EH	08 42	06.445	+0.041	-01 07	33.02	+0.76	1.438797
77 03 27.06	3229.56481	TC	08 42	34.422	+0.063	-00 44	51.80	+1.15	1.448027
77 03 31.06	3233.55538	TR	08 44	43.141	+0.050	+00 42	40.23	+1.15	1.486698
77 04 01.05	3234.55307	TR	08 45	19.416	+0.035	+01 03	43.59	+0.88	1.496784
77 04 02.05	3235.55077	EH	08 45	57.335	+0.071	+01 24	26.69	+0.61	1.507028
77 04 11.03	3244.53092	SG	08 52	45.810	+0.045	+04 15	24.34	+1.42	1.605796
77 04 12.03	3245.52879	EH	08 53	38.262	+0.037	+04 32	38.43	+0.85	1.617436
77 04 13.03	3246.52668	TR	08 54	32.059	+0.046	+04 49	31.88	+0.69	1.629196
77 04 14.02	3247.52459	RB	08 55	27.179	+0.072	+05 06	04.38	+0.62	1.641072
77 04 22.01	3255.50834	RB	09 03	32.337	+0.059	+07 05	55.17	+0.28	1.739835

JUNO

75 11 29.47	2745.97500	EH	10 46	38.976	+0.016	+00 00	45.19	-0.01	2.303276
75 12 05.46	2751.96257	EJ	10 52	21.354	+0.036	-00 29	02.71	+0.13	2.241616
75 12 06.46	2752.96045	DR	10 53	14.562	+0.010	-00 33	36.08	-0.23	2.231265
75 12 12.45	2758.94748	HC	10 58	09.776	+0.040	-00 58	09.26	+0.08	2.168953
75 12 18.43	2764.93400	EH	11 02	21.449	+0.072	-01 17	36.30	+0.28	2.106705
76 01 05.39	2782.89017	CS	11 10	02.310	-0.014	-01 39	10.68	+0.13	1.926780
76 01 06.39	2783.88757	RM	11 10	13.825	+0.006	-01 38	31.20	+0.68	1.917381
76 01 10.38	2787.87700	EH	11 10	44.202	+0.016	-01 33	48.31	+0.08	1.880746
76 01 22.34	2799.84354	EJ	11 09	43.922	+0.029	-00 58	21.04	-0.36	1.782482
76 02 10.29	2818.78549	SG	11 00	48.910	-0.005	+01 03	20.35	+0.25	1.679052
76 02 20.25	2828.75308	HD	10 53	26.769	+0.027	+02 33	34.41	+0.67	1.659379
76 02 21.25	2829.74980	EJ	10 52	38.994	+0.018	+02 43	14.09	-0.24	1.658917
76 02 27.23	2835.73003	HC	10 47	45.667	-0.009	+03 42	48.35	+0.21	1.662180
76 02 28.23	2836.72673	EH	10 46	56.257	+0.001	+03 52	53.91	+0.21	1.663745
76 02 29.22	2837.72343	CS	10 46	06.847	-0.011	+04 03	01.00	+0.45	1.665602
76 03 02.22	2839.71683	RM	10 44	28.392	+0.011	+04 23	16.82	+0.89	1.670201
76 03 07.20	2844.70039	EH	10 40	27.067	+0.000	+05 13	37.52	+0.14	1.686834
76 03 08.20	2845.69712	RB	10 39	40.105	-0.032	+05 23	34.52	+0.14	1.691032
76 03 18.16	2855.66486	SG	10 32	30.983	+0.020	+06 58	30.27	+0.54	1.748441
76 03 20.16	2857.65854	WD	10 31	16.212	-0.005	+07 16	07.81	+0.24	1.763154
76 03 23.15	2860.64915	RB	10 29	32.466	+0.014	+07 41	31.21	+0.59	1.787137
76 03 24.15	2861.64605	TR	10 29	00.198	-0.022	+07 49	40.23	+0.05	1.795630
76 03 29.13	2866.63076	EH	10 26	37.998	+0.013	+08 28	01.12	+0.01	1.841666
76 04 03.12	2871.61585	RB	10 24	49.347	-0.010	+09 01	59.76	-0.01	1.893290
76 04 04.11	2872.61292	EH	10 24	31.863	+0.018	+09 08	14.37	-0.18	1.904237

JUNO

Date	J.E.D.	O L	Obs. R.A.	(O-C)	L Obs.	Decl.	(O-C)	Distance
244			h m s	s	° ' "	"		
76 04 05.11	2873.61000	WD	10 24 15.804	+0.042	+09 14	18.05	-0.08	1.915381
76 04 06.11	2874.60710	HC	10 24 01.107	-0.003	+09 20	10.50	-0.03	1.926717
76 04 10.10	2878.59567	HC	10 23 16.834	-0.027	+09 41	47.23	-0.24	1.973885
76 04 12.09	2880.59005	RR	10 23 03.315	-0.007	+09 51	28.05	-0.38	1.998501
76 04 13.09	2881.58727	DR	10 22 58.700	+0.019	+09 56	01.83	-0.29	2.011050
76 04 14.08	2882.58450	RR	10 22 55.467	+0.014	+10 00	24.32	-0.33	2.023756
76 04 16.08	2884.57901	TR	10 22 53.217	+0.007	+10 08	36.13	-0.27	2.049618
76 04 23.06	2891.56031	RB	10 23 28.573	+0.003	+10 31	33.62	-0.98	2.144476
76 04 24.06	2892.55770	HD	10 23 39.007	+0.032	+10 34	08.62	-0.22	2.158527

VESTA

75 07 19.40	2612.90356	HD	00 19 08.106	+0.057	-06 30	25.01	+0.16	1.716048
75 07 20.40	2613.90116	WD	00 19 36.600	+0.075	-06 32	18.50	+0.78	1.706290
75 07 22.40	2615.89630	RM	00 20 29.102	+0.077	-06 36	39.78	+0.57	1.687013
75 07 23.39	2616.89385	TR	00 20 53.108	+0.096	-06 39	06.71	+0.69	1.677498
75 07 24.39	2617.89138	EJ	00 21 15.496	+0.030	-06 41	45.24	+0.28	1.668069
75 07 26.39	2619.88638	EH	00 21 55.765	+0.060	-06 47	34.12	+0.89	1.649484
75 07 27.38	2620.88386	SG	00 22 13.486	+0.033	-06 50	46.30	+0.13	1.640334
75 07 28.38	2621.88131	HC	00 22 29.714	+0.117	-06 54	08.86	+0.11	1.631284
75 07 29.38	2622.87875	RR	00 22 44.208	+0.088	-06 57	42.42	+0.18	1.622337
75 07 30.38	2623.87617	TR	00 22 57.110	+0.101	-07 01	26.79	+0.50	1.613497
75 07 31.37	2624.87357	EH	00 23 08.280	+0.035	-07 05	22.94	+0.08	1.604766
75 08 01.37	2625.87095	TC	00 23 17.855	+0.041	-07 09	29.26	+0.46	1.596150
75 08 02.37	2626.86831	WD	00 23 25.774	+0.071	-07 13	47.26	+0.07	1.587651
75 08 09.35	2633.84928	WD	00 23 32.923	+0.077	-07 48	47.28	+0.71	1.531799
75 08 10.35	2634.84648	CS	00 23 26.966	+0.055	-07 54	28.35	+0.42	1.524390
75 08 13.34	2637.83796	TR	00 22 58.737	+0.055	-08 12	27.16	+0.36	1.503111
75 08 18.32	2642.82337	SG	00 21 37.367	+0.063	-08 45	17.49	-0.04	1.471020
75 08 25.30	2649.80214	EH	00 18 33.614	+0.030	-09 36	11.08	+0.50	1.433935
75 08 26.30	2650.79903	RR	00 18 01.059	+0.058	-09 43	49.15	+0.47	1.429446
75 08 27.30	2651.79591	HC	00 17 26.926	+0.015	-09 51	31.40	+0.38	1.425169
75 08 28.29	2652.79277	RM	00 16 51.415	+0.070	-09 59	17.56	+0.00	1.421108
75 08 29.29	2653.78961	CS	00 16 14.389	+0.055	-10 07	05.74	+0.75	1.417268
75 09 10.25	2665.75060	EH	00 07 13.759	+0.081	-11 41			1.389506
75 09 13.24	2668.74061	WD	00 04 37.657	+0.109	-12 04	17.19	+0.05	1.388155
75 09 28.19	2683.69026	SG	23 51 03.300	+0.033	-13 39	22.28	+0.25	1.416186
75 10 01.18	2686.68026	SG	23 48 27.086	-0.005	-13 53	22.29	+0.16	1.428693
75 10 05.17	2690.66706	HC	23 45 09.446	+0.069	-14 08	52.50	-0.16	1.448830
75 10 07.16	2692.66052	TC	23 43 36.266	+0.064	-14 15	11.56	+0.43	1.460343
75 10 08.16	2693.65727	EH	23 42 51.284	+0.032	-14 17	59.65	+0.30	1.466451
75 10 12.14	2697.64441	SG	23 40 03.561	+0.037	-14 26	45.03	-0.05	1.493147
75 10 13.14	2698.64124	RR	23 39 24.884	+0.055	-14 28	19.12	+0.42	1.500368
75 10 14.14	2699.63808	DR	23 38 47.539	+0.034	-14 29	39.31	+0.15	1.507802
75 10 15.13	2700.63493	TR	23 38 11.642	+0.056	-14 30	44.00	+0.82	1.515446
75 10 16.13	2701.63180	HD	23 37 37.166	+0.065	-14 31	35.52	+0.17	1.523294
75 10 22.11	2707.61340	EH	23 34 41.825	+0.033	-14 31	41.54	+0.32	1.574489
75 10 23.11	2708.61039	HD	23 34 18.081	+0.046	-14 30	53.95	+0.21	1.583674
75 10 24.11	2709.60741	CS	23 33 55.919	+0.042	-14 29	52.17	+0.74	1.593034
75 10 31.09	2716.58703	HC	23 32 06.413	+0.022	-14 16	37.13	+1.07	1.663210
75 11 03.08	2719.57858	RB	23 31 44.249	+0.028	-14 07	50.79	-0.17	1.695584
75 11 09.06	2725.56220	WD	23 31 44.521	+0.033	-13 45	04.93	+0.58	1.763906
75 11 17.04	2733.54139	RB	23 33 13.854	+0.005	-13 05	10.80	+0.36	1.861172
75 11 18.04	2734.53887	HC	23 33 31.896	+0.082	-12 59	30.27	+0.11	1.873746
75 11 19.04	2735.53636	EH	23 33 51.293	+0.062	-12 53	41.28	-0.27	1.886400
75 11 20.03	2736.53387	SG	23 34 12.185	+0.105	-12 47	43.00	+0.26	1.899134
75 11 21.03	2737.53140	HD	23 34 34.383	+0.043	-12 41	37.25	+0.01	1.911943

VESTA

Date	J.E.D.	O L	Obs.	R.A.	(O-C)	L Obs.	Decl.	(O-C)	Distance
	244		h m s	s		° ' "	"		
75 11 23.03	2739.52650	WD	23 35	23.046	+0.026	-12 28	59.73	+1.59	1.937777
75 11 25.02	2741.52166	RM	23 36	17.170	+0.056	-12 15	53.21	+1.30	1.963881
75 11 26.02	2742.51927	HD	23 36	46.197	+0.051	-12 09	09.31	+0.62	1.977027
75 11 29.01	2745.51217	RB	23 38	21.022	+0.040	-11 48	12.58	+0.52	2.016805
75 12 02.01	2748.50520	EH	23 40	07.166	+0.067	-11 26	14.39	+0.14	2.057034
75 12 03.00	2749.50291	HD	23 40	44.939	+0.037	-11 18	41.34	+0.60	2.070530
75 12 05.00	2751.49836	TR	23 42	04.069	+0.033	-11 03	17.28	+0.84	2.097633
75 12 06.00	2752.49611	TR	23 42	45.378	+0.052	-10 55	26.22	+0.97	2.111233
75 12 10.99	2757.48503	CS	23 46	28.241	+0.052	-10 14	47.44	+0.83	2.179610
75 12 11.98	2758.48285	TC	23 47	15.952	+0.048	-10 06	24.20	+0.38	2.193343
75 12 13.98	2760.47852	WD	23 48	54.375	+0.048	-09 49	22.01	+0.33	2.220844
75 12 16.97	2763.47212	SG	23 51	29.149	-0.014	-09 23	12.11	+1.45	2.262155
75 12 18.97	2765.46790	RB	23 53	17.007	+0.031	-09 05			2.289711
75 12 20.96	2767.46373	RR	23 55	08.342	+0.046	-08 47	19.42	+1.04	2.317262
75 12 22.96	2769.45959	RM	23 57	03.012	+0.020	-08 28	58.86	+0.64	2.344792
75 12 23.96	2770.45754	TC	23 58	01.626	+0.057	-08 19	42.23	+1.01	2.358545
75 12 24.96	2771.45549	RR	23 59	01.019	+0.071	-08 10	22.58	+0.66	2.372287
76 01 04.93	2782.43357	SG	00 10	43.786	+0.028	-06 23	58.72	+1.28	2.522162
76 10 15.46	3066.96178	TC	07 33	07.859	+0.029	+19 41	12.60	+0.02	2.356391
76 10 16.46	3067.95970	RB	07 34	03.623	+0.051	+19 40	14.62	-0.41	2.342904
76 10 19.45	3070.95336	DR	07 36	44.209	+0.071	+19 37	35.94	-0.44	2.302434
76 10 23.44	3074.94472	EJ	07 40	01.957	+0.025	+19 34	42.81	+0.31	2.248554
76 10 27.44	3078.93585	TR	07 43	00.062	+0.070	+19 32	40.28	+0.42	2.194947
76 10 28.43	3079.93360	CS	07 43	41.328	+0.050	+19 32	18.00	-0.28	2.181613
76 10 29.43	3080.93133	TR	07 44	21.257	+0.021	+19 32	00.63	+0.04	2.168312
76 10 30.43	3081.92904	EJ	07 44	59.922	+0.073	+19 31	47.25	+0.34	2.155047
76 11 02.42	3084.92210	DR	07 46	47.472	+0.045	+19 31	31.02	-0.27	2.115499
76 11 06.41	3088.91260	EH	07 48	50.975	+0.059	+19 32	13.47	-1.07	2.063462
76 11 08.41	3090.90775	CS	07 49	43.792	+0.029	+19 33	06.09	+0.09	2.037798
76 11 11.40	3093.90034	CS	07 50	51.469	+0.028	+19 35	03.66	+0.18	1.999819
76 11 13.40	3095.89531	EH	07 51	28.623	+0.048	+19 36	49.49	-0.64	1.974887
76 11 14.39	3096.89276	EJ	07 51	44.698	+0.018	+19 37	52.21	-0.10	1.962549
76 11 17.39	3099.88501	EJ	07 52	22.942	+0.052	+19 41	35.84	+0.33	1.926093
76 11 19.38	3101.87974	EH	07 52	39.826	+0.079	+19 44	35.82	+0.04	1.902300
76 11 21.37	3103.87440	EJ	07 52	49.572	+0.015	+19 48	01.90	-0.08	1.878956
76 11 22.37	3104.87169	SG	07 52	51.785	+0.003	+19 49	53.99	-0.98	1.867466
76 11 23.37	3105.86897	DR	07 52	52.222	+0.018	+19 51	54.90	+0.27	1.856103
76 11 24.37	3106.86622	TR	07 52	50.824	+0.017	+19 54	01.35	+0.32	1.844871
76 12 01.35	3113.84640	EJ	07 51	49.533	+0.034	+20 11	55.38	+0.22	1.770323
76 12 03.34	3115.84054	DR	07 51	15.359	+0.061	+20 18	02.12	-0.48	1.750466
76 12 06.33	3118.83160	SG	07 50	10.114	+0.035	+20 28	03.10	-0.09	1.722011
76 12 10.32	3122.81938	EJ	07 48	17.350	+0.039	+20 42	53.57	+0.37	1.686746
76 12 24.27	3136.77408	EH	07 38	04.841	-0.025	+21 46	00.53	+0.70	1.591368
76 12 30.25	3142.75368	EH	07 32	16.696	+0.015	+22 16	29.20	+0.62	1.565844
77 01 05.23	3148.73290	EJ	07 25	55.756	+0.036	+22 47	27.29	-0.05	1.550415
77 01 12.21	3155.70843	CS	07 18	11.452	+0.013	+23 22	45.99	-0.12	1.545537
77 01 30.15	3173.64660	EH	06 59	53.195	+0.042	+24 39			1.596913
77 02 01.14	3175.63999	EH	06 58	13.804	+0.030	+24 46	55.20	+0.09	1.607881
77 02 02.14	3176.63672	TC	06 57	26.462	+0.026	+24 50	15.10	-0.24	1.613721
77 02 03.13	3177.63346	SG	06 56	40.771	+0.050	+24 53	30.25	-0.07	1.619791
77 02 09.11	3183.61433	SG	06 52	42.721	+0.054	+25 11	11.69	+0.15	1.660832
77 02 11.11	3185.60812	TC	06 51	37.930	+0.029	+25 16	24.64	-0.06	1.676170
77 03 09.04	3211.53569	TR	06 49	33.246	+0.058	+25 57	20.54	-0.30	1.931766

VESTA

Date	J.E.D.	O L	Obs.	R.A.	(O-C)	L Obs.	Decl.	(O-C)	Distance
	244		h m s	s		° ' "	"		
77 03 10.03	3212.53320	RB	06 49	54.318	+0.061	+25 58			1.943079
77 03 11.03	3213.53074	RR	06 50	17.147	+0.051	+25 58	40.05	-0.13	1.954464
77 03 12.03	3214.52829	TC	06 50	41.770	+0.083	+25 59	14.37	-0.07	1.965917
77 03 16.02	3218.51870	RR	06 52	37.175	+0.019	+26 00	55.36	-0.21	2.012349
77 03 17.02	3219.51635	RB	06 53	10.263	+0.065	+26 01	11.76	-0.10	2.024093
77 03 18.01	3220.51402	CS	06 53	44.908	+0.040	+26 01	24.53	-0.01	2.035885
77 03 20.01	3222.50942	TC	06 54	59.049	+0.035	+26 01	38.68	-0.33	2.059596
77 03 24.00	3226.50042	TR	06 57	45.972	+0.071	+26 01	24.13	-0.22	2.107433
77 03 25.00	3227.49822	DR	06 58	31.399	+0.039	+26 01	11.29	-0.29	2.119459
77 03 26.00	3228.49603	EH	06 59	18.306	+0.043	+26 00	55.08	-0.06	2.131505
77 03 26.99	3229.49385	TC	07 00	06.623	+0.038	+26 00	35.05	+0.02	2.143568

HEBE

76 07 27.38	2986.87801	DR	00 16	45.572	+0.056	-05 58	21.49	-1.32	1.275574
76 07 30.37	2989.87136	EJ	00 18	59.887	+0.079	-06 22	20.70	-1.07	1.246445
76 08 04.36	2994.85995	CS	00 22	13.822	+0.055	-07 08	19.07	-1.11	1.200315
76 08 11.34	3001.84320	RB	00 25	38.572	+0.051	-08 25	08.96	-1.33	1.141367
76 08 18.33	3008.82548	EJ	00 27	39.188	+0.050	-09 55	49.16	-0.77	1.089814
76 08 19.32	3009.82287	EH	00 27	49.227	+0.061	-10 09	48.67	-0.81	1.083112
76 08 20.32	3010.82023	RR	00 27	57.465	+0.104	-10 24	02.51	-0.90	1.076586
76 08 21.32	3011.81757	TC	00 28	03.756	+0.040	-10 38			1.070237
76 08 30.29	3020.79271	RB	00 27	38.731	+0.076	-12 57	04.48	+1.08	1.021624
76 08 31.29	3021.78985	TR	00 27	27.043	+0.034	-13 13	11.24	+0.34	1.017220
76 09 04.28	3025.77820	TC	00 26	23.918	+0.025	-14 18	17.45	-0.18	1.001699
76 09 06.27	3027.77226	EH	00 25	42.965	+0.066	-14 51	02.33	-1.12	0.995216
76 09 08.27	3029.76626	RB	00 24	56.036	+0.011	-15 23	41.31	+0.18	0.989598
76 09 09.26	3030.76324	EH	00 24	30.517	+0.021	-15 39	58.19	-0.64	0.987117
76 09 13.25	3034.75099	DR	00 22	35.713	+0.073	-16 44			0.979400
76 09 19.23	3040.73225	EJ	00 19	11.874	-0.010	-18 15			0.974526
76 10 06.18	3057.67844	EH	00 08	31.036	-0.009	-21 34	23.58	+0.53	1.003694
76 10 10.17	3061.66600	EJ	00 06	19.579	+0.022	-22 03	41.33	+0.79	1.019115
76 10 12.16	3063.65985	RB	00 05	20.074	-0.031	-22 15	35.91	+0.11	1.027932
76 10 13.16	3064.65680	BK	00 04	52.194	+0.018	-22 20	50.60	+0.82	1.032607
76 10 15.15	3066.65074	TC	00 04	00.286	+0.085	-22 29	58.72	+0.48	1.042476
76 10 16.15	3067.64773	RB	00 03	36.273	+0.006	-22 33	50.94	+0.77	1.047664
76 10 23.13	3074.62718	RB	00 01	31.618	+0.051	-22 48	19.49	+0.41	1.088466
76 10 30.11	3081.60760	EH	00 00	51.314	+0.078	-22 41	44.40	-0.24	1.136335
76 11 02.10	3084.59953	CS	00 01	01.626	+0.045	-22 32	59.32	+1.43	1.158729
76 11 03.10	3085.59688	TR	00 01	08.716	-0.027	-22 29	21.48	+0.96	1.166421
76 11 06.09	3088.58907	TC	00 01	41.345	+0.021	-22 16	19.71	+2.52	1.190142
76 11 07.09	3089.58651	RB	00 01	55.858	-0.000	-22 11	19.77	+2.10	1.198255
76 11 09.08	3091.58144	RR	00 02	30.340	-0.036	-22 00	20.10	+3.26	1.214775
76 11 10.08	3092.57894	SG	00 02	50.358	+0.022	-21 54	25.04	+1.00	1.223177
76 11 11.08	3093.57646	RB	00 03	12.068	-0.007	-21 48	08.94	+1.67	1.231672
76 11 13.07	3095.57157	TC	00 04	00.892	+0.053	-21 34	45.52	+1.46	1.248929
76 11 14.07	3096.56915	RR	00 04	27.852	+0.020	-21 27	37.17	+2.41	1.257688
76 11 17.06	3099.56201	TR	00 05	59.083	+0.018	-21 04	38.39	+1.43	1.284456
76 11 18.06	3100.55967	TR	00 06	32.879	+0.036	-20 56	27.56	+1.07	1.293536
76 11 19.06	3101.55735	DR	00 07	08.293	+0.010	-20 48			1.302692
76 11 21.05	3103.55276	RB	00 08	24.096	+0.022	-20 30	23.60	+2.67	1.321221
76 11 23.05	3105.54825	EH	00 09	46.352	+0.054	-20 11	52.35	+2.21	1.340024
76 11 24.05	3106.54602	RB	00 10	29.807	+0.037	-20 02	17.28	+1.55	1.349523
76 11 26.04	3108.54162	RR	00 12	01.321	+0.013	-19 42	27.66	+1.86	1.368704

HEBE

Date	J.E.D.	O L	Obs.	R.A.	(O-C)	L Obs.	Decl.	(O-C)	Distance
244			h m s	s		° ' "	"		
76 11 28.04	3110.53728	EH	00 13	38.837	+0.044	-19 21	50.84	+1.50	1.388115
76 11 30.03	3112.53301	CS	00 15	22.074	+0.054	-19 00	28.39	+1.69	1.407739
76 12 01.03	3113.53090	BK	00 16	15.699	-0.021	-18 49	30.66	+2.25	1.417628
76 12 02.03	3114.52880	RR	00 17	10.827	+0.052	-18 38	24.09	+1.38	1.427566
76 12 03.03	3115.52673	SG	00 18	07.215	+0.052	-18 27	05.72	+2.31	1.437550
76 12 04.02	3116.52466	RB	00 19	04.873	+0.017	-18 15	38.95	+1.98	1.447579
76 12 05.02	3117.52261	EH	00 20	03.863	+0.036	-18 04	02.82	+1.61	1.457655
76 12 06.02	3118.52058	TR	00 21	04.119	+0.064	-17 52	16.93	+1.90	1.467773
76 12 09.01	3121.51455	RR	00 24	12.079	+0.057	-17 16	08.50	+1.60	1.498374
76 12 21.99	3134.48977	RB	00 39	40.463	-0.030	-14 26	50.33	+2.99	1.634630
76 12 26.98	3139.48075	RR	00 46	21.300	+0.034	-13 17	26.23	+2.26	1.688236
76 12 30.97	3143.47370	TR	00 51	56.974	+0.040	-12 20	40.27	+1.81	1.731436
77 01 02.97	3146.46851	RR	00 56	16.780	+0.040	-11 37	28.27	+3.45	1.763981

IRIS

76 06 07.37	2936.86758	SG	20 44	34.562	+0.079	-13 53	49.95	-2.23	1.742577
76 06 16.34	2945.84230	TR	20 43	32.941	+0.053	-13 27	20.45	-2.75	1.636293
76 06 28.31	2957.80612	RR	20 38	37.125	-0.003	-13 04	18.38	-2.76	1.515017
76 07 13.26	2972.75725	CS	20 27	12.176	+0.027	-12 56	28.85	-3.17	1.404933
76 07 14.25	2973.75388	TR	20 26	16.493	+0.036	-12 56	44.26	-2.73	1.399449
76 07 21.23	2980.72999	EJ	20 19	22.392	+0.011	-13 00			1.368016
76 07 26.21	2985.71272	CS	20 14	09.496	-0.004	-13 06	26.12	-3.47	1.353212
76 08 02.19	2992.68852	TC	20 06	48.139	-0.018	-13 16	27.81	-2.10	1.343351
76 08 12.15	3002.65444	RR	19 57	01.411	-0.033	-13 33	56.48	-2.32	1.350537
76 08 13.15	3003.65109	EH	19 56	07.993	-0.012	-13 35	47.31	-1.89	1.352564
76 08 17.14	3007.63785	CS	19 52	46.998	-0.002	-13 43	15.82	-2.03	1.362921
76 08 18.13	3008.63458	TC	19 52	00.235	+0.007	-13 45	08.69	-2.74	1.366059
76 08 21.12	3011.62488	RB	19 49	49.130	-0.002	-13 50	42.38	-2.27	1.376737
76 08 22.12	3012.62168	SG	19 49	08.631	-0.037	-13 52	32.76	-2.53	1.380707
76 08 23.12	3013.61850	RR	19 48	29.938	+0.039	-13 54	21.75	-2.27	1.384877
76 08 24.12	3014.61534	RB	19 47	52.856	-0.010	-13 56	10.35	-2.63	1.389242
76 08 31.09	3021.59384	TC	19 44	25.263	-0.021	-14 08	06.35	-2.13	1.424919
76 09 01.09	3022.59085	RR	19 44	03.370	+0.017	-14 09	41.50	-2.36	1.430695
76 09 04.08	3025.58204	TC	19 43	09.488	-0.028	-14 14	12.39	-1.93	1.448944
76 09 05.08	3026.57915	TR	19 42	55.594	+0.016	-14 15	38.28	-2.17	1.455319
76 09 06.08	3027.57628	EH	19 42	43.649	-0.005	-14 17	01.08	-1.89	1.461834
76 09 07.07	3028.57343	RR	19 42	33.725	-0.020	-14 18	21.45	-1.87	1.468485
76 09 08.07	3029.57061	TR	19 42	25.819	-0.030	-14 19	39.15	-1.92	1.475267
76 09 09.07	3030.56781	EH	19 42	19.973	+0.002	-14 20	54.36	-2.33	1.482177
76 09 10.07	3031.56504	RR	19 42	16.098	-0.010	-14 22	06.07	-2.21	1.489211
76 09 12.06	3033.55956	RR	19 42	14.445	+0.022	-14 24	19.84	-1.53	1.503638
76 09 14.05	3035.55417	SG	19 42	20.812	+0.044	-14 26	21.53	-1.66	1.518517
76 09 29.02	3050.51664	SG	19 47	17.369	+0.029	-14 33	29.09	-1.14	1.641719
76 10 11.99	3063.48787	RB	19 57	00.243	+0.026	-14 25	41.28	-0.22	1.758861
76 10 12.99	3064.48579	BK	19 57	56.130	+0.007	-14 24	29.16	-0.86	1.768080
76 10 13.98	3065.48372	RR	19 58	53.584	+0.079	-14 23	10.66	-0.68	1.777317
76 10 14.98	3066.48167	TC	19 59	52.380	+0.039	-14 21	46.75	-0.74	1.786572
76 10 15.98	3067.47963	RB	20 00	52.659	+0.049	-14 20	17.16	-0.81	1.795841
76 10 21.97	3073.46776	TR	20 07	23.264	+0.039	-14 09	15.76	-0.90	1.851650

FLORA

Date	J.E.D.	O L	Obs.	R.A.	(O-C)	L Obs.	Decl.	(O-C)	Distance
	244		h m s	s		° ' "	"		
76 02 10.33	2818.83122	SG	12 06	51.188	-.000	+07 15	35.92	+0.54	1.526142
76 02 16.31	2824.81273	SG	12 03	48.644	+.007	+07 58	37.64	-0.99	1.490021
76 02 19.30	2827.80323	SG	12 01	55.202	+.038	+08 21	50.46	+0.38	1.474895
76 02 20.30	2828.80003	HC	12 01	14.307	+.056	+08 29	46.08	+0.23	1.470313
76 02 21.30	2829.79681	EJ	12 00	31.883	+.029	+08 37	47.25	+0.44	1.465968
76 02 28.27	2836.77384	EH	11 54	57.384	+.041	+09 35	34.20	+0.33	1.442503
76 03 12.23	2849.72980	EJ	11 42	37.070	+.006	+11 21	34.19	+0.46	1.433587
76 03 20.20	2857.70247	WD	11 34	42.151	+.011	+12 18	17.18	-0.81	1.451200
76 03 23.19	2860.69229	RB	11 31	50.076	+.005	+12 36	50.03	-0.24	1.462255
76 03 24.19	2861.68892	TR	11 30	53.997	-.012	+12 42	37.38	-0.68	1.466467
76 03 25.19	2862.68555	HD	11 29	58.674	-.035	+12 48	13.31	-0.51	1.470939
76 03 26.18	2863.68219	RB	11 29	04.233	-.001	+12 53	36.76	-0.54	1.475669
76 03 28.18	2865.67550	RR	11 27	18.051	+.019	+13 03	45.87	-0.37	1.485893
76 03 29.17	2866.67218	EH	11 26	26.416	-.012	+13 08	30.61	-0.63	1.491380
76 04 03.16	2871.65574	RB	11 22	25.673	-.008	+13 28	54.21	-0.49	1.522435
76 04 04.15	2872.65250	EH	11 21	41.363	+.020	+13 32	17.88	-0.38	1.529344
76 04 05.15	2873.64928	WD	11 20	58.392	+.010	+13 35	26.59	-1.37	1.536476
76 04 09.14	2877.63654	BK	11 18	20.977	-.022	+13 45	47.25	-1.00	1.567153
76 04 10.13	2878.63340	HC	11 17	45.423	+.006	+13 47	47.83	-1.04	1.575337
76 04 12.13	2880.62717	RR	11 16	38.935	+.006	+13 51	08.73	-0.54	1.592291
76 04 13.12	2881.62408	DR	11 16	08.043	-.017	+13 52	28.53	-0.73	1.601054
76 04 14.12	2882.62101	RR	11 15	38.787	-.008	+13 53	34.79	-1.11	1.610000
76 04 16.11	2884.61493	TR	11 14	45.103	-.030	+13 55	07.96	-1.56	1.628428
76 04 23.09	2891.59425	RB	11 12	29.168	+.053	+13 53			1.698153
77 05 17.38	3280.88107	RR	19 40	17.807	+.179	-18 43	30.82	-3.72	1.644633
77 05 23.37	3286.86527	SG	19 41	08.331	+.128	-18 48	48.15	-3.48	1.574908
77 05 27.35	3290.85432	SG	19 41	05.749	+.195	-18 54	31.55	-4.90	1.530957
77 06 05.33	3299.82841	CS	19 39	10.104	+.136	-19 14	02.25	-4.72	1.440711
77 06 08.32	3302.81938	CS	19 37	57.321	+.153	-19 22	38.15	-4.62	1.413609
77 06 12.31	3306.80703	EJ	19 35	53.707	+.148	-19 35	42.46	-5.75	1.380065
77 06 30.25	3324.74764	RR	19 21	06.642	+.158	-20 52	51.35	-5.04	1.271593
77 07 04.23	3328.73381	CS	19 16	54.560	+.138	-21 12	39.90	-5.75	1.257918

METIS

75 09 28.42	2683.91624	SG	05 17	21.810	-.033	+21 01	33.35	+2.47	1.619901
75 09 29.41	2684.91419	RR	05 18	20.944	-.052	+21 04	13.68	+2.14	1.608688
75 09 30.41	2685.91213	RM	05 19	18.582	-.091	+21 06	53.04	+1.86	1.597520
75 10 01.41	2686.91005	SG	05 20	14.820	-.025	+21 09	31.66	+1.77	1.586396
75 10 07.40	2692.89717	RM	05 25	18.430	-.048	+21 25	10.87	+2.34	1.520775
75 10 08.39	2693.89496	RR	05 26	03.187	-.064	+21 27	46.17	+2.41	1.510052
75 10 12.39	2697.88590	WD	05 28	44.588	-.072	+21 38	07.43	+2.26	1.467870
75 10 13.38	2698.88358	EJ	05 29	20.399	-.057	+21 40	43.54	+2.41	1.457516
75 10 21.36	2706.86424	RM	05 32	56.897	-.097	+22 01	54.46	+3.36	1.377877
75 10 22.36	2707.86171	TR	05 33	14.856	-.077	+22 04	36.34	+2.55	1.368364
75 10 23.36	2708.85916	HC	05 33	30.672	-.083	+22 07	20.45	+2.85	1.358959
75 10 31.34	2716.83787	EJ	05 34	17.940	-.095	+22 29	55.26	+2.72	1.288053
75 11 01.34	2717.83509	WD	05 34	13.593	-.121	+22 32	50.52	+2.85	1.279789
75 11 02.33	2718.83228	EH	05 34	06.962	-.113	+22 35	47.38	+3.35	1.271673
75 11 03.33	2719.82945	SG	05 33	58.005	-.111	+22 38	44.42	+2.81	1.263706
75 11 04.33	2720.82658	RM	05 33	46.687	-.148	+22 41	43.45	+3.06	1.255896
75 11 05.32	2721.82370	HD	05 33	33.119	-.114	+22 44	42.97	+2.67	1.248246
75 11 09.31	2725.81188	SG	05 32	15.563	-.174	+22 56	53.04	+3.02	1.219328
75 11 11.31	2727.80582	RM	05 31	23.178	-.143	+23 03	03.00	+3.37	1.205931
75 11 12.30	2728.80274	SG	05 30	53.643	-.118	+23 06	08.44	+3.20	1.199512

38 SIX-INCH TRANSIT CIRCLE OBSERVATIONS OF THE SUN, MOON, AND PLANETS

METIS

Date	J.E.D.	O L	Obs.	R.A.	(O-C)	L Obs.	Decl.	(O-C)	Distance
	244		h m s	s		° ' "	"		
75 11 17.29	2733.78701	RR	05 27	53.462	-.135	+23 21	39.88	+3.65	1.170348
75 11 18.28	2734.78379	RM	05 27	11.192	-.147	+23 24	45.27	+3.21	1.165126
75 11 19.28	2735.78055	CS	05 26	26.952	-.153	+23 27	50.75	+3.36	1.160116
75 11 20.28	2736.77729	EJ	05 25	40.766	-.176	+23 30	55.51	+3.41	1.155321
75 11 22.27	2738.77070	TR	05 24	02.908	-.125	+23 37	02.27	+3.35	1.146389
75 11 23.27	2739.76737	SG	05 23	11.296	-.108	+23 40	03.47	+2.77	1.142259
75 11 26.26	2742.75728	RR	05 20	26.420	-.153	+23 49	01.17	+3.79	1.131254
75 11 29.25	2745.74703	EH	05 17	28.292	-.152	+23 57	40.68	+3.46	1.122390
75 12 02.24	2748.73666	RM	05 14	19.284	-.151	+24 05	59.51	+3.70	1.115743
75 12 06.22	2752.72269	DR	05 09	55.173	-.159	+24 16	24.99	+3.75	1.110436
75 12 11.21	2757.70512	CS	05 04	15.720	-.172	+24 28			1.109609
75 12 12.20	2758.70160	TC	05 03	07.693	-.223	+24 30			1.110220
75 12 17.18	2763.68409	SG	04 57	33.661	-.182	+24 40	37.84	+3.61	1.117130
75 12 18.18	2764.68061	EH	04 56	28.744	-.201	+24 42	30.94	+4.00	1.119274
75 12 19.18	2765.67714	RB	04 55	24.769	-.153	+24 44			1.121670
75 12 23.16	2769.66339	RM	04 51	19.321	-.187	+24 51	11.10	+2.68	1.133729
75 12 24.16	2770.65999	TC	04 50	21.081	-.196	+24 52	48.68	+3.55	1.137354
76 01 02.13	2779.63022	TC	04 42	50.936	-.134	+25 05	59.82	+3.46	1.180466
76 01 05.12	2782.62070	DR	04 40	55.789	-.154	+25 10	06.27	+3.76	1.198790
76 01 10.11	2787.60534	CS	04 38	28.325	-.127	+25 16	56.77	+3.90	1.233292
76 01 15.09	2792.59066	TR	04 36	58.903	-.140	+25 24	02.73	+3.09	1.272291
76 01 18.08	2795.58217	TR	04 36	33.538	-.127	+25 28	32.92	+3.37	1.297637
76 01 20.08	2797.57665	DR	04 36	28.338	-.115	+25 31	39.54	+3.08	1.315283
76 01 22.07	2799.57124	TR	04 36	32.433	-.093	+25 34	52.86	+3.56	1.333494
76 01 24.07	2801.56593	EH	04 36	45.692	-.128	+25 38	11.58	+3.26	1.352243
76 02 08.03	2816.52937	CS	04 43	06.390	-.103	+26 06	16.22	+2.60	1.507182
76 02 10.02	2818.52490	RM	04 44	32.146	-.089	+26 10	21.94	+2.55	1.529370
76 02 24.00	2832.49587	RM	04 57	48.715	-.100	+26 39	41.82	+2.75	1.691350
76 02 25.99	2834.49201	TR	05 00	07.920	-.092	+26 43	47.47	+2.26	1.715231
77 03 15.37	3217.86620	TR	15 10	26.608	-.021	-12 45			1.869353
77 03 29.33	3231.82541	EH	15 06	44.569	+.024	-12 29	53.61	-0.94	1.743859
77 04 10.29	3243.78752	CS	14 59	20.538	-.084	-12 04	11.07	-1.15	1.665871
77 04 27.23	3260.73050	SG	14 44	01.469	-.091	-11 16	29.96	-1.81	1.615043
77 05 06.20	3269.69969	EJ	14 35	01.654	-.089	-10 51	22.66	-2.49	1.619793
77 05 10.19	3273.68606	DR	14 31	06.919	-.124	-10 41	18.53	-0.96	1.629015
77 05 12.18	3275.67928	RR	14 29	12.671	-.099	-10 36	42.05	-2.83	1.635243
77 05 17.16	3280.66248	RR	14 24	39.886	-.123	-10 26	27.58	-2.08	1.655433
77 05 27.13	3290.62978	RR	14 16	52.052	-.097	-10 13	18.37	-2.47	1.714467
77 05 29.12	3292.62341	CS	14 15	33.730	-.082	-10 12	00.17	-1.85	1.729023
77 06 05.10	3299.60166	CS	14 11	44.825	-.080	-10 11	17.81	-2.14	1.786404
77 06 08.09	3302.59259	CS	14 10	29.137	-.061	-10 12	50.14	-1.66	1.813834

EUNOMIA

76 06 16.38	2945.88344	TR	21 42	57.632	+.080	-10 28	31.66	-1.20	1.846040
76 06 28.35	2957.85053	RR	21 42	44.662	+.019	-09 19	42.54	-0.61	1.702630
76 07 13.31	2972.80562	CS	21 37	02.179	+.048	-08 11	34.86	-1.34	1.554631
76 07 14.30	2973.80248	TR	21 36	26.789	+.063	-08 07	49.95	-1.23	1.546254
76 07 21.28	2980.78004	EJ	21 31	38.481	+.032	-07 44			1.493528
76 07 27.26	2986.76022	DR	21 26	41.090	+.007	-07 28	53.03	-0.68	1.457164
76 07 30.25	2989.75015	EJ	21 23	58.248	+.015	-07 22	29.14	-1.14	1.442246
76 08 02.24	2992.74000	SG	21 21	08.053	+.006	-07 16			1.429583
76 08 04.23	2994.73319	CS	21 19	11.425	+.022	-07 13	50.12	-0.83	1.422410
76 08 11.21	3001.70923	RB	21 12	11.536	+.026	-07 05	40.06	-0.50	1.405390

EUNOMIA

Date	J.E.D.	O L	Obs.	R.A.	(O-C)	L Obs.	Decl.	(O-C)	Distance
	244		h m s	s		° ' "	"		
76 08 12.21	3002.70580	EJ	21 11	10.979	+0.018	-07 04	50.79	-0.52	1.403989
76 08 17.19	3007.68868	CS	21 06	10.765	-0.001	-07 01	53.56	-1.21	1.400845
76 08 18.19	3008.68527	TC	21 05	11.734	-0.017	-07 01	30.44	-1.06	1.400985
76 08 19.18	3009.68186	SG	21 04	13.236	-0.012	-07 01	11.23	-0.98	1.401380
76 08 20.18	3010.67847	RR	21 03	15.326	-0.006	-07 00	55.15	-0.41	1.402029
76 08 21.18	3011.67507	RB	21 02	18.051	-0.022	-07 00	43.29	-0.60	1.402928
76 08 22.17	3012.67169	SG	21 01	21.556	+0.014	-07 00	34.99	-1.09	1.404080
76 08 23.17	3013.66832	RR	21 00	25.824	+0.012	-07 00	29.04	-0.86	1.405480
76 08 31.14	3021.64176	TC	20 53	36.899	+0.000	-07 01	07.92	-0.92	1.425370
76 09 01.14	3022.63850	RR	20 52	51.351	+0.012	-07 01	19.92	-0.76	1.428899
76 09 05.13	3026.62564	TR	20 50	03.651	+0.016	-07 02	16.75	-1.20	1.445181
76 09 07.12	3028.61932	RR	20 48	49.047	+0.001	-07 02	46.74	-0.98	1.454571
76 09 08.12	3029.61619	TR	20 48	14.146	-0.038	-07 03	01.59	-0.84	1.459565
76 09 09.11	3030.61307	EH	20 47	40.981	-0.006	-07 03	15.92	-0.53	1.464756
76 09 10.11	3031.60998	RR	20 47	09.489	+0.007	-07 03	30.32	-0.80	1.470138
76 09 12.10	3033.60385	RR	20 46	11.675	+0.023	-07 03	56.14	-0.59	1.481462
76 09 14.10	3035.59780	SG	20 45	20.845	-0.033	-07 04	17.86	-0.38	1.493511
76 09 18.09	3039.58596	TC	20 44	01.081	-0.012	-07 04	44.33	-0.64	1.519666
76 09 19.08	3040.58305	EJ	20 43	45.723	-0.040	-07 04			1.526612
76 09 29.06	3050.55518	SG	20 42	56.118	-0.009	-07 02	38.40	-0.20	1.603964
76 10 12.02	3063.52211	RB	20 46	26.775	+0.015	-06 50	38.81	+0.16	1.721226
76 10 13.02	3064.51971	BK	20 46	55.054	-0.001	-06 49	12.20	-0.09	1.730833
76 10 14.02	3065.51732	RR	20 47	25.019	+0.027	-06 47	39.96	+0.38	1.740508
76 10 15.01	3066.51496	TC	20 47	56.562	+0.011	-06 46	03.56	+0.04	1.750251
76 10 16.01	3067.51261	RB	20 48	29.712	-0.002	-06 44	21.23	+0.54	1.760055
76 10 19.01	3070.50568	DR	20 50	18.631	-0.013	-06 38	45.28	-0.12	1.789826
76 10 26.99	3078.48795	RR	20 56	15.212	+0.011	-06 19	44.63	+1.01	1.871314
76 10 28.98	3080.48368	SG	20 57	58.481	-0.021	-06 14	02.49	+0.73	1.892038
76 10 29.98	3081.48157	EH	20 58	52.176	+0.031	-06 11	03.33	-0.14	1.902439
76 11 01.98	3084.47532	CS	21 01	40.775	-0.002	-06 01	26.79	+0.59	1.933763
76 11 02.97	3085.47327	TR	21 02	39.482	+0.004	-05 58	02.83	+0.61	1.944239

40 SIX-INCH TRANSIT CIRCLE OBSERVATIONS OF THE SUN, MOON, AND PLANETS

MOON													
Date	J.E.D.	O	L	Obs.	R.A.	(O-C)	L	Obs.	Decl.	(O-C)	Lun.		
	244			h m s	s			° ' "	"				
75 05 20.02	2552.52339	CS	1	11 13	39.532	+1.718	N	-00 27	44.75	-10.41	648		
75 05 21.06	2553.55904	RR	1	12 09	04.347	+1.687	N	-05 47	26.27	-09.09			
75 05 22.10	2554.59543	CS	1	13 05	34.388	+1.764	N	-10 47	04.67	-09.88			
75 05 24.17	2556.67148	TC	1	15 03	16.181	+1.890	N	-18 26	56.00	-05.41			
75 05 28.32	2560.82432	RM	2	18 59	43.404	+1.669		-19 05					
75 05 29.36	2561.85862	EJ	2	19 53	11.515	+1.571	N	-16 25	29.10	+03.66			
75 06 18.01	2581.50897	RR	1	12 47	10.346	+1.718		-09 10			649		
75 06 21.12	2584.62050	HD	1	15 40	02.481	+1.864	N	-19 52	40.36	-04.65			
75 06 22.16	2585.65899	CS	1	16 39	34.172	+1.797	N	-21 11	26.78	-01.38			
75 06 23.20	2586.69712	EH	1	17 38	34.292	+1.804	N	-21 12	18.53	+00.14			
75 06 24.23	2587.73410	HC	2	18 35	54.204	+1.824		-19 59					
75 07 19.07	2612.57168	HC	1	16 19	56.650	+1.753	N	-20 48	15.89	-01.47	650		
75 07 20.11	2613.60930	TC	1	17 18	12.196	+1.756	N	-21 16	52.83	-01.19			
75 07 22.18	2615.68161	RM	1	19 10	30.365	+1.611		-18 41					
75 07 23.22	2616.71542	TR	1	20 03	15.846	+1.585	N	-15 55	37.57	+01.93			
75 07 24.25	2617.74752	EJ	2	20 53	33.168	+1.480	N	-12 27	24.72	+04.81			
75 07 26.31	2619.80760	EH	2	22 28	11.866	+1.370	N	-04 13	43.09	+06.37			
75 07 27.34	2620.83645	SG	2	23 13	47.917	+1.344	N	+00 09	48.16	+03.04			
75 07 28.37	2621.86520	HC	2	23 59	15.360	+1.435	N	+04 31	56.98	+07.41			
75 07 29.39	2622.89441	RR	2	00 45	22.397	+1.540	N	+08 43	46.80	+07.79			
75 07 30.42	2623.92463	TR	2	01 32	57.033	+1.531	N	+12 36	11.93	-00.67			
75 08 19.13	2643.62978	EH	1	19 46	03.616	+1.611		-16 51			651		
75 08 20.16	2644.66214	RB	1	20 36	43.694	+1.446	S	-13 40	47.83	+05.84			
75 08 21.19	2645.69305	DR	1	21 25	18.221	+1.419	N	-09 55	56.60	+08.13			
75 08 22.22	2646.72283	CS	2	22 12	14.262	+1.381	N	-05 48	36.56	+04.44			
75 08 25.31	2649.80964	EH	2	00 29	25.080	+1.407	N	+07 06	21.18	+04.48			
75 08 26.34	2650.83932	RR	2	01 16	13.217	+1.519	N	+11 04	07.17	+07.00			
75 08 27.37	2651.87015	HC	2	02 04	40.328	+1.496	N	+14 35	46.49	+04.04			
75 08 28.40	2652.90250	RM	2	02 55	19.799	+1.619	N	+17 31	11.30	+04.54			
75 08 29.44	2653.93663	CS	2	03 48	32.988	+1.664	N	+19 39	08.69	+01.68			
75 08 30.47	2654.97257	RR	2	04 44	23.535	+1.767	N	+20 48	17.35	+01.20			
75 09 15.04	2670.54477	DR	1	19 29	45.314	+1.502		-17 31			652		
75 09 27.42	2682.92138	EJ	2	05 20	52.311	+1.739	N	+20 42	36.82	-00.06			
75 09 28.46	2683.95844	SG	2	06 18	19.249	+1.758		+19 57					
75 10 11.96	2697.45813	SG	1	19 11	05.753	+1.672		-18 09			653		
75 10 12.99	2698.49187	RR	1	20 03	45.576	+1.470		-15 29					
75 10 14.02	2699.52373	DR	1	20 53	42.027	+1.398	S	-12 08	45.24	+07.39			
75 10 15.05	2700.55409	TR	1	21 41	29.319	+1.450	S	-08 20	13.14	+05.64			
75 10 16.08	2701.58345	HD	1	22 27	49.414	+1.366	S	-04 13	25.31	+10.70			
75 10 20.20	2705.70093	TR	1	01 33	14.033	+1.489	N	+12 11	06.85	+02.30			
75 10 21.23	2706.73250	RM	2	02 22	45.675	+1.458	N	+15 28	32.44	+01.31			
75 10 22.27	2707.76551	TR	2	03 14	21.786	+1.617	N	+18 05	09.27	+01.75			
75 10 23.30	2708.79994	HC	2	04 08	01.228	+1.642	N	+19 50	08.37	+02.28			
75 11 12.00	2728.49798	TR	1	22 10	51.252	+1.422	S	-05 41	04.34	+04.19	654		
75 11 14.06	2730.55589	EH	1	23 42	21.437	+1.381	S	+02 48	15.97	+13.71			
75 11 15.08	2731.58503	TC	1	00 28	22.630	+1.444	S	+06 57	57.05	+07.78			
75 11 17.15	2733.64623	RR	1	02 04	38.044	+1.493	S	+14 22	20.11	+06.15			
75 11 18.18	2734.67900	HC	1	02 55	54.207	+1.581	S	+17 15	32.99	+05.66			
75 11 19.21	2735.71339	CS	2	03 49	30.106	+1.686	S	+19 20	26.97	+00.68			
75 11 20.25	2736.74919	EJ	2	04 45	08.049	+1.705	S	+20 26	15.91	+01.33			
75 11 22.32	2738.82301	TR	2	06 39	37.142	+1.777	S	+19 12	50.44	+01.10			
75 11 23.36	2739.85986	SG	2	07 36	46.113	+1.755	S	+16 52	30.82	-03.15			
75 11 24.40	2740.89613	RR	2	08 33	04.630	+1.752	S	+13 31	22.18	-06.16			
75 11 26.47	2742.96701	RR	2	10 23	18.626	+1.727	S	+04 34	15.25	-09.90			
75 12 10.97	2757.46957	CS	1	23 24	10.203	+1.394	S	+01 02	42.77	+08.86	655		
75 12 12.00	2758.49852	TC	1	00 09	54.770	+1.405	S	+05 15	59.35	+07.71			
75 12 14.06	2760.55850	WD	1	01 44	24.294	+1.493		+12 57					
75 12 17.16	2763.65983	SG	1	04 22	33.838	+1.788	S	+20 07	35.76	+02.02			
75 12 18.20	2764.69681	EH	1	05 19	54.173	+1.792	S	+20 34	58.23	-01.43			
75 12 19.23	2765.73462	EJ	2	06 18	25.766	+1.801		+19 50					

SIX-INCH TRANSIT CIRCLE OBSERVATIONS OF THE SUN, MOON, AND PLANETS 41

MOON		J.E.D.	O	L	Obs.	R.A.	(O-C)	L	Obs	Decl.	(O-C)	Lun.
Date												
	244				h m s	s			° ' "	"		
76 01 08.94	2786.44089	SG	1	00	37	05.949	+1.413	S	+07 27	37.44	+09.51	656
76 01 09.97	2787.47070	CS	1	01	24	04.638	+1.470	S	+11 16	55.60	+06.74	
76 01 13.07	2790.56854	HC	1	03	57	11.743	+1.665	S	+19 25	29.96	+01.65	
76 01 15.14	2792.64224	TR	1	05	51	29.567	+1.844	S	+20 17	13.76	-02.87	
76 01 16.18	2793.68061	EH	1	06	50	50.355	+1.872	S	+18 54	13.39	-05.78	
76 01 22.40	2799.90309	EJ		12	35			S	-07 13	03.60	-09.47	
76 01 23.44	2800.93971	SG	2	13	32	34.089	+1.841	S	-11 47	34.43	-08.15	
76 01 24.48	2801.97707	CS	2	14	30	27.712	+1.934	S	-15 36	20.36	-07.39	
76 02 10.01	2818.51297	RM	1	04	27	20.155	+1.630	S	+19 52	06.63	+02.31	657
76 02 15.20	2823.70112	WD	1	09	18	43.963	+1.745	S	+10 24	50.43	-11.23	
76 02 16.24	2824.73896	SG	2	10	17	18.698	+1.817	S	+05 31	52.01	-06.99	
76 02 17.28	2825.77653	RM	2	11	15	30.608	+1.796	S	+00 14	34.39	-13.46	
76 02 19.35	2827.85192	SG	2	13	12	15.218	+2.156	S	-09 58	53.12	-08.28	
76 02 20.39	2828.89021	HD	2	14	11	28.890	+1.839	S	-14 11	18.93	-08.11	
76 02 21.43	2829.92895	EJ	2	15	11	22.193	+1.879	S	-17 23	59.05	-06.50	
76 03 11.03	2848.53130	HD	1	06	52	05.129	+1.786		+18 31			658
76 03 12.07	2849.56850	SG	1	07	49	45.007	+1.861	N	+16 04	43.71	-03.96	
76 03 15.18	2852.68142	HC	1	10	44	37.434	+1.803	N	+03 04	28.79	-10.94	
76 03 18.30	2855.79790	HC	2	13	44	38.489	+2.021	S	-12 13	26.44	-08.75	
76 03 19.34	2856.83807	EJ	2	14	46	35.405	+1.914	S	-16 00	05.37	-05.86	
76 03 20.38	2857.87851	CS	2	15	48	55.828	+1.981	S	-18 35	09.81	-03.50	
76 03 21.42	2858.91858	EH	2	16	50	44.003	+1.997	S	-19 50	42.60	-03.87	
76 04 09.01	2877.51415	BK	1	08	21	39.842	+1.789	N	+14 07	00.83	-05.83	659
76 04 10.05	2878.55037	HC	1	09	17	54.056	+1.776	N	+10 14	57.78	-06.71	
76 04 11.09	2879.58689	CS	1	10	14	35.027	+1.849	N	+05 37	58.99	-10.51	
76 04 12.12	2880.62400	RR	1	11	12	06.557	+1.805	N	+00 31	28.10	-09.94	
76 04 13.16	2881.66205	DR	1	12	10	58.992	+1.802	N	-04 44	30.31	-10.19	
76 04 14.20	2882.70131	RR	1	13	11	37.436	+1.935	S	-09 45	41.77	-10.49	
76 04 15.24	2883.74187	CS	2	14	14	08.153	+2.039	S	-14 06	11.44	-07.33	
76 04 16.28	2884.78342	HC	2	15	18	04.513	+2.091	S	-17 22	44.95	-05.90	
76 04 17.33	2885.82523	EH	2	16	22	23.410	+2.024	S	-19 19	21.13	-03.95	
76 04 18.37	2886.86632	WD		17	25			S	-19 50	37.22	+01.11	
76 04 19.41	2887.90576	HC	2	18	26	32.596	+1.866	N	-19 01	52.38	+02.14	
76 05 09.03	2907.53259	RR	1	10	46	34.066	+1.784		+02 47			660
76 05 10.07	2908.56880	RR	1	11	42	47.099	+1.762	N	-02 15	47.44	-08.76	
76 05 11.11	2909.60625	SG	1	12	40	48.910	+1.900	N	-07 18	05.40	-08.76	
76 05 13.19	2911.68608	HD	1	14	43	57.807	+2.008	N	-15 47	32.01	-08.81	
76 05 15.27	2913.77040	WD	2	16	53	36.270	+2.035	S	-19 45	03.92	-01.21	
76 06 08.05	2937.55358	FH	1	13	15	08.896	+1.870	N	-09 58	14.83	-05.81	661
76 06 09.09	2938.59225	BK	1	14	14	56.093	+1.917	N	-14 06	24.11	-07.58	
76 06 10.13	2939.63263	HC	1	15	17	11.020	+1.967	N	-17 19	04.95	-05.17	
76 06 12.22	2941.71606	CS	2	17	25	31.915	+2.063	N	-19 52	29.69	-00.31	
76 06 13.26	2942.75695	WD	2	18	28	30.860	+1.962	N	-19 02	39.28	+02.59	
76 06 15.33	2944.83249	EH	2	20	25	28.329	+1.759	N	-13 57	58.06	+05.99	
76 06 16.37	2945.86666	TR	2	21	18	45.022	+1.548	N	-10 17	43.16	+01.83	
76 07 10.16	2969.66366	TR		18	00			N	-19 34	35.02	-00.70	662
76 07 13.28	2972.77635	CS	2	20	54	48.388	+1.738	N	-12 10	10.54	+02.57	
76 07 14.31	2973.80981	TR	2	21	47	03.204	+1.546	N	-08 14	37.47	+01.13	
76 07 16.37	2975.87209	EJ	2	23	24	52.155	+1.488		+00 15			
76 08 05.03	2995.53471	SG	1	16	36	34.352	+1.988	N	-19 18	34.31	-01.45	663
76 08 11.25	3001.75348	RB	2	22	16	07.147	+1.621	N	-05 57	16.65	+03.72	
76 08 12.28	3002.78465	EJ	2	23	05	03.760	+1.458	N	-01 41	52.62	+07.43	
76 08 14.34	3004.84497	CS	2	00	40	03.039	+1.481	N	+06 36	10.88	+05.45	
76 08 18.47	3008.96973	EJ	2	03	55	58.235	+1.594	N	+18 14	23.44	+01.68	
76 09 04.06	3025.56427	TC	1	19	17	31.930	+1.821		-17 18			664
76 09 05.10	3026.60010	TR	1	20	13	13.005	+1.733		-14 41			
76 09 06.13	3027.63423	EH	1	21	06	25.581	+1.706	S	-11 20	29.28	+06.57	
76 09 07.17	3028.66680	RR	1	21	57	24.056	+1.545	S	-07 29	36.97	+06.90	
76 09 08.20	3029.69815	TR	1	22	46	36.334	+1.524	N	-03 21	51.08	+06.28	
76 09 09.23	3030.72866	EH	2	23	34	36.420	+1.466	N	+00 50	43.10	+04.70	
76 09 10.26	3031.75876	EJ	2	00	22	00.446	+1.471	N	+04 57	19.19	+06.07	
76 09 12.32	3033.81926	CS	2	01	57	15.689	+1.530		+12 14			
76 09 13.35	3034.85033	DR	2	02	46	03.839	+1.547		+15 08			
76 09 14.38	3035.88225	SG	2	03	36	05.742	+1.511	N	+17 21	41.70	+02.11	

42 SIX-INCH TRANSIT CIRCLE OBSERVATIONS OF THE SUN, MOON, AND PLANETS

MOON		J.E.D.	O	L	Obs.	R.A.	(O-C)	L	Obs.	Decl.	(O-C)	Lun.
Date												
	244				h m s	s			° ' "	"		
76 10 05.11	3056.61322	RR	1	22	30	25.454	+1.463	S	-04 41	13.20	+06.81	665
76 10 06.14	3057.64365	EH	1	23	18	18.743	+1.657	S	-00 33	15.85	+09.31	
76 10 07.17	3058.67363	EJ	1	00	05	32.342	+1.473	S	+03 33	00.28	+10.96	
76 10 10.26	3061.76467	EJ	2	02	28	49.240	+1.534	N	+14 06	52.26	+03.59	
76 10 11.30	3062.79628	DR	2	03	18	24.167	+1.512	N	+16 34	17.68	+02.26	
76 10 12.33	3063.82870	RB	2	04	09	10.208	+1.530	N	+18 16	58.04	+00.81	
76 10 13.36	3064.86189	TR	2	05	01	02.259	+1.571	N	+19 08	51.53	-00.14	
76 10 14.40	3065.89570	RR	2	05	53	47.499	+1.750	S	+19 05	34.21	-02.81	
76 10 15.43	3066.92992	TC	2	06	47	09.240	+1.668		+18 04			
76 10 16.46	3067.96441	RB	2	07	40	54.173	+1.747	S	+16 06	47.39	-02.94	
76 10 28.93	3080.42775	SG	1	19	37	14.322	+1.816		-16 16			666
76 11 02.06	3084.55950	CS	1	23	03	14.937	+1.474	S	-01 50	02.81	+08.29	
76 11 03.09	3085.58940	TR	1	23	50	21.955	+1.428	S	+02 15	59.68	+08.23	
76 11 06.18	3088.67967	TC	1	02	12	32.438	+1.538	S	+13 09	30.68	+05.36	
76 11 07.21	3089.71105	RB	2	03	01	47.816	+1.587	S	+15 50	16.79	+00.75	
76 11 08.24	3090.74331	CS	2	03	52	19.360	+1.607	N	+17 48	52.76	+01.51	
76 11 10.31	3092.81001	EJ	2	05	36	30.641	+1.706	S	+19 13	34.69	-01.33	
76 11 11.34	3093.84395	CS	2	06	29	27.607	+1.675	S	+18 32	20.16	+00.09	
76 11 13.41	3095.91183	EH	2	08	15	21.781	+1.667	S	+14 23	58.04	-05.77	
76 11 14.45	3096.94565	EJ	2	09	08	08.765	+1.685	S	+11 05	13.62	-06.24	
76 11 27.94	3110.44287	EH	1	21	57	21.142	+1.623		-07 27			667
76 11 30.00	3112.50480	CS	1	23	34	39.440	+1.472	S	+00 48	55.95	+08.37	
76 12 01.03	3113.53462	BK	1	00	21	39.536	+1.455	S	+04 51	41.46	+07.80	
76 12 02.06	3114.56442	RR	1	01	08	38.226	+1.485	S	+08 39	34.89	+07.11	
76 12 03.09	3115.59467	SG	1	01	56	15.024	+1.501	S	+12 04	38.78	+04.77	
76 12 04.13	3116.62569	RB	1	02	44	59.263	+1.534	S	+14 58	51.37	+02.90	
76 12 05.16	3117.65768	EH	1	03	35	07.000	+1.602	S	+17 14	05.84	+04.08	
76 12 06.19	3118.69063	TR	1	04	26	38.409	+1.634	S	+18 42	32.63	+01.69	
76 12 10.33	3122.82692	EJ	2	07	59	13.011	+1.805	S	+15 23	17.80	-05.34	
76 12 13.43	3125.92758	TR	2	10	36	23.171	+1.727	S	+04 21	22.41	-06.46	
76 12 30.01	3142.50892	RB	1	01	38	53.436	+1.404	S	+10 41	46.25	+01.57	668
76 12 31.04	3143.53961	TR	1	02	27	08.471	+1.507	S	+13 49	45.77	+05.91	
77 01 01.07	3144.57113	EJ	1	03	16	36.299	+1.613		+16 21			
77 01 02.10	3145.60366	CS	1	04	07	31.242	+1.621	S	+18 10	20.88	+03.04	
77 01 03.14	3146.63718	RR	1	04	59	51.287	+1.648	S	+19 08	31.77	+00.92	
77 01 05.21	3148.70615	SG	1	06	47	20.314	+1.696	S	+18 14	21.02	-02.23	
77 01 06.24	3149.74088	RB	2	07	41	25.438	+1.664	S	+16 20	01.18	-02.66	
77 01 11.41	3154.91116	TC	2	12	07	00.753	+1.868	S	-03 13	54.75	-07.46	
77 01 12.45	3155.94627	CS		13	01			S	-07 44	53.50	-09.77	
77 01 26.95	3170.45256	RR	1	02	07	53.604	+1.511	S	+12 22	19.95	+10.24	669
77 01 30.05	3173.54864	EH	1	04	38	27.695	+1.641	S	+18 39	28.50	+02.59	
77 01 31.08	3174.58243	SG	1	05	31	11.608	+1.606	S	+19 07	30.43	-00.50	
77 02 01.12	3175.61692	EH	1	06	24	56.029	+1.656	S	+18 38	23.66	-04.19	
77 02 02.15	3176.65181	TC	1	07	19	15.652	+1.702	S	+17 10	32.30	-03.90	
77 02 03.19	3177.68680	SG	1	08	13	44.209	+1.770	S	+14 45	44.42	-03.70	
77 02 06.29	3180.79102	EH	2	10	56	02.735	+1.751	S	+03 06	13.76	-08.88	
77 02 08.36	3182.86123	EH	2	12	45	18.445	+1.858	S	-06 10	42.18	-06.53	
77 02 09.40	3183.89752	CS	2	13	41	39.430	+1.846	S	-10 27	51.55	-05.30	
77 02 10.43	3184.93500	RR	2	14	39	43.503	+2.048	S	-14 07	57.58	-08.69	
77 02 11.47	3185.97373	EJ	2	15	39	35.313	+1.990	S	-16 54	41.47	-04.72	
77 03 09.35	3211.84786	SG	2	14	20	20.718	+1.919	S	-12 48	59.82	-06.93	670
77 03 10.39	3212.88709	CS	2	15	20	55.476	+1.984	S	-15 57	29.41	-03.45	
77 03 11.43	3213.92705	EH	2	16	22	33.937	+1.973	S	-18 00	19.95	-04.01	
77 03 26.94	3229.43798	TC	1	05	39	27.709	+1.661	S	+18 45	05.23	+01.32	671
77 03 31.07	3233.57352	TR	1	09	10	56.381	+1.731	N	+11 09	01.21	-01.07	
77 04 01.11	3234.60813	TR	1	10	04	51.520	+1.753	N	+07 14	57.40	-07.07	
77 04 02.14	3235.64334	EH	1	10	59	38.930	+1.763	N	+02 48	28.46	-09.95	
77 04 07.34	3240.83700	SG	2	15	58	59.498	+2.071	S	-17 17	01.30	-02.01	
77 04 08.38	3241.87854	EH	2	17	02	54.917	+2.117	S	-18 35	18.32	-02.63	
77 04 10.46	3243.95903	CS	2	19	07	01.008	+1.840	N	-17 16	18.99	+01.27	
77 04 11.50	3244.99667	DR	2	20	05	18.613	+1.840	N	-14 56	22.38	+02.38	

SIX-INCH TRANSIT CIRCLE OBSERVATIONS OF THE SUN, MOON, AND PLANETS 43

MOON

Date	J.E.D.	O	L	Obs.	R.A.	(O-C)	L	Obs.	Decl.	(O-C)	Lun.
	244			h m s	s			° ' "	"		
77 04 28.02	3261.51727	CS	1	09 40	06.513	+1.675	N	+09 06	41.82	-08.63	672
77 04 30.09	3263.58594	TR	1	11 27	09.520	+1.734	N	+00 29	19.76	-12.85	
77 05 01.12	3264.62205	RB	1	12 23	13.968	+1.800	N	-04 13	31.03	-04.78	
77 05 02.16	3265.65989	TR	1	13 21	49.628	+2.030	N	-08 49	34.44	-04.84	
77 05 06.33	3269.82712	EH	2	17 39	03.508	+2.177	N	-18 45	37.09	-01.24	
77 05 07.37	3270.86892	EJ	2	18 43	21.882	+2.095	N	-17 57	03.26	+01.79	
77 05 27.00	3290.49612	RR	1	11 03	54.368	+1.673	N	+02 34	52.85	-09.98	673
77 05 28.03	3291.53034	EH	1	11 57	15.984	+1.694	N	-01 56	48.64	-11.52	
77 05 29.07	3292.56611	CS	1	12 52	51.525	+1.823	N	-06 31	27.37	-08.59	
77 06 04.32	3298.81554	EJ	2	19 16	40.311	+2.121	N	-17 07	15.90	+02.34	
77 06 05.36	3299.85547	CS	2	20 18	16.618	+1.967	N	-14 28	34.81	+02.47	
77 06 30.18	3324.67565	RR	1	17 37	11.298	+2.099	N	-18 49	58.02	+00.62	674
77 07 01.22	3325.71878	TC	2	18 43	24.433	+2.146	N	-18 06	54.55	+01.14	
77 07 02.26	3326.76057	TR	2	19 47	41.497	+2.009	N	-16 03	10.30	+00.36	
77 07 03.30	3327.80016	EJ	2	20 48	48.194	+1.973	N	-12 55	16.21	+05.30	
77 07 04.34	3328.83728	CS	2	21 46	20.310	+1.821	N	-09 04	22.74	+04.95	
77 07 06.41	3330.90515	EH	2	23 32	13.465	+1.498	N	-00 30	52.15	+07.16	